Public Utilities

Volume 65 No. 10



May 12, 1960

THE RATE-MAKING POWERS OF THE ICC

By Eric Schenker

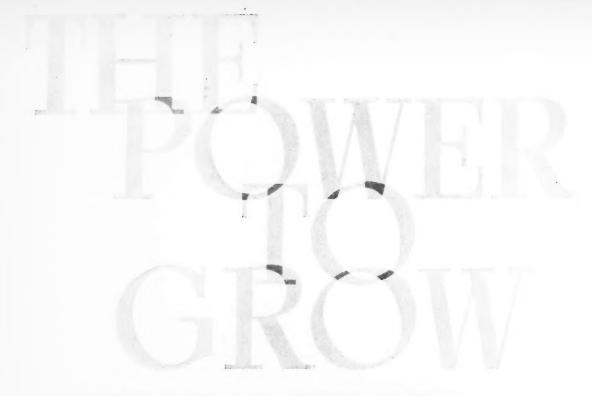
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What's Wrong with Commission Regulation?

By Harry M. Trebing

Let's Not Kill the Goose That Lays the Golden Eggs By John D. Garwood

Bell Laboratories Build a Space Terminal



BUILDING BIG MEANS MONEY

The men who make the management decisions of America's electric utilities know that their individual companies and their industry are up against the challenge of the most dramatic need for system expansion and new construction we have ever seen. The population and economic growth projected for the next decade are the measure of the challenge.

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Public Utilities Fortnightly . . for federal and state regulation of both privately owned and operated utilities and publicly owned and operated utilities, on a fair and nondiscriminatory basis; for nondiscriminatory administration of laws; for equitable and nondiscriminatory taxation; and, in general—for the perpetuation of the free enterprise system. It is an open forum for the free expression of opinion concerning public utility regulation and allied topics. It is supported by subscription and advertising revenue; it is not the mouthpiece of any group or faction; it is not under the editorial supervision of, nor does it bear the endorsement of, any organization or association. The editors do not assume responsibility for the opinions expressed by its contributors.

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NUMBER 10



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What's Wrong with Commission Regulation? Part I.

A review of recent criticisms of commission organization, operation, and procedure.

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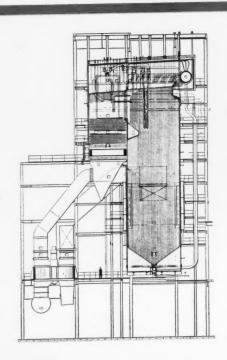
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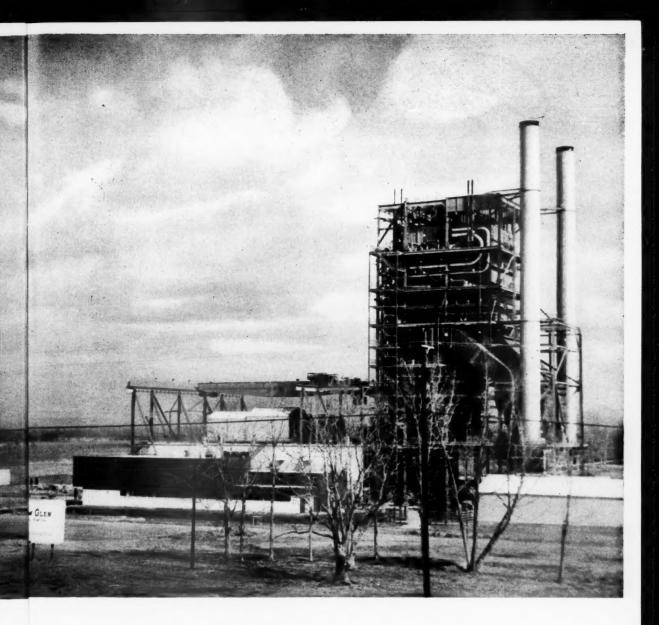
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WILLOW GLEN STATION Goes into Service



This C-E steam generating unit is now in service at the Willow Glen Power Station of Gulf States Utilities Company. It is a radiant reheat boiler, with the reheater section located between the primary and secondary superheater surfaces. An economizer section is located below the primary superheater surface in the rear pass. Regenerative air heaters follow the economizer section. This unit is designed to produce 1,100,000 lb of steam per hr at 1800 psi throttle pressure and 1000 F reheated to 1000 F. Primary fuel is natural gas with provision for burning oil through C-E Tilting, Tangential Burners. It is arranged for future coal firing.

ALL T



Recently placed in service for the Gulf States Utility Company was the first 162,000-kw unit at their new Willow Glen Station. This station is located at a fast-growing load center approximately 15 miles south of Baton Rouge, Louisiana, on the east bank of the Mississippi River at St. Gabriel, Ascension Parish.

A second unit, rated at 220,000 kw, is scheduled to go into service the first part of 1964. The total generating capability at the Willow Glen Station will eventually exceed 1,000,000 kw.

The circulating cooling water is obtained from the Mississippi River. The station was

designed and constructed by the Stone & Webster Engineering Corporation. Steam for both of the turbo-generators here is supplied by Combustion Engineering radiant reheat boilers, the first of which is shown in sectional elevation and briefly described on the opposite page.

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Pages with the Editors

I is with a profound sense of sorrow and personal loss on the part of the editors and publishers that we note the passing of HENRY CLIFFORD SPURR, one of the founders of Public Utilities Reports, Inc., at his residence in Rochester, New York, on April 14, 1960, at the age of ninety. Mr. Spurr was the first editor of "Public Utilities Reports," established in 1915. He later became editor of PUB-LIC UTILITIES FORTNIGHTLY, which began in 1929. In 1942, Mr. Spurr's immediate direction of the FORTNIGHTLY was taken over by Francis X. Welch, but Mr. Spurr continued as editor-in-chief of all "P.U.R." publications, a post now occupied by Ellsworth Nichols. Mr. Spurr was also author of one of the first comprehensive works on public utility regulatory law, "Guiding Principles of Public Service Regulation," published in three volumes between 1924 and 1926. He retired from active editorial duty in 1950 but continued as an editorial con-

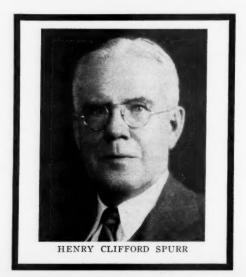
Mr. Spurr was a lifelong resident of Rochester, where he was born on November 7, 1869. He was a graduate of St. Lawrence University, Canton, New York (AB, '94), and a member of Beta Theta Pi and Phi Beta Kappa fraternities. His classmate, roommate, and lifelong friend was Owen D. Young, later to become general counsel and eventually president of General Electric Company, of Schenectady, New York. It was Mr. Young who sparked the interest which led to the establishment of "Public Utilities Reports." Some years prior to 1915 he recognized a growing need of a permanent record of regulatory decisions throughout the states.

Mr. Spurr started his career as a newspaper reporter for the old Rochester *Post-Express*. He became assistant city editor of the former Rochester *Herald*. He received his legal training with a firm of Rochester attorneys and was admitted to the bar in New York state in 1896.

He became assistant district attorney in 1896, was attorney for the Anti-Saloon League in 1900, and joined the legal editing staff of the Lawyers Co-operative Publishing Company in 1905. There he wrote many notes and articles on legal subjects, including one of textbook length on what is known among real estate lawyers as the old rule in Shelly's Case.

A. S. Hills, now president of Public Utilities Reports, Inc., in the establishment of the well-known and accepted system of law reports in the field of public utility regulation, "Public Utilities Reports." Allied publications followed. Prior to that year there had been no regular or systematic reporting of commission decisions on a national basis. These reports were enthusiastically received, not only by the legal profession in the regulatory field, but also by the commissions themselves, by the courts, educators, legislators, and others specializing in regulatory matters.

THROUGHOUT his entire editorial career, Mr. Spurr was a strong advocate of commission regulation of public utilities at both the state and federal levels.



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PAGES WITH THE EDITORS (Continued)

On several occasions during periods in which commission regulation as an effective method of administrative law was attacked, Mr. Spurr by his writings and public addresses vigorously defended the commissions and their accomplishments in assisting the development of public utility industries in the United States.

HE leading article in this issue deals with the oldest of our federal commissions, the Interstate Commerce Commission, which was established on a limited basis by act of Congress in 1887. The author is Eric Schenker, assistant professor of economics at the University of Wisconsin. He has also taught at the University of Tennessee and the University of Florida, from which he holds a PhD degree. In addition to his academic work, Dr. Schenker has been employed by the U. S. Corps of Engineers to perform economic investigations of southern port facilities. He has also been associated with the U.S. Bureau of Public Roads and the Highway Traffic Safety Center at Michigan State University.

THE article entitled "What's Wrong with Commission Regulation?" which begins on page 660 is a two-part feature which grows out of the recent criticisms of the effectiveness of the work of the commissions. Congressional investigators in Washington, as well as political critics and economic critics elsewhere, have been questioning the validity



ERIC SCHENKER



HARRY M. TREBING

of the regulatory commissions. But such criticisms also raise the question of suggested alternatives, if any. Would they work as well?

Dr. Harry M. Trebing, author of this two-part series, is a native of Baltimore and a graduate of the University of Maryland (BS, '50; MA, '52). He took his Doctor of Philosophy in economics from the University of Wisconsin in 1958 and is now assistant professor in economics at the University of Nebraska where he specializes in public utilities, transportation, and land economics.

Just by way of making this an all academic issue of featured authors, we have, beginning on page 671, a rather thoughtful examination of the progress being made in socialist theory in the United States by Dr. John D. Garwood, professor of economics at Fort Hays Kansas State College. Dr. Garwood has previously written on matters relating to public utility economics in this publication. He deals in this issue with the dangers of permanent injury to the free enterprise system which could result from gradual acceptance of doctrinaire beliefs in dogmatic Socialism.

THE next number of this magazine will be out May 26th.

The Editors

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Coming IN THE NEXT ISSUE

(May 26, 1960, issue)



ARE EARNINGS DECREASING IN THE ELECTRIC POWER INDUSTRY?

Since 1939 earnings on total electric utility plant values have declined, as well as earnings on percentage of operating revenue. Yet the rate of return stated and the stated value of capital stock and long-term debt have remained fairly constant, even while the return on plant was decreasing. These are the facts brought out by Professor Franklin H. Cook of the Pennsylvania State University by comprehensive statistics and analysis. He concludes that the rate of earnings on capital structure will remain steady but that through increasing use of internal funds the asset value behind outstanding bonds and capital stock will continue to grow.

WORK MEASUREMENT UNITS FOR UTILITY EMPLOYEES

There is constant pressure on utility management to hold rates down, while keeping earnings up and reducing unit costs in operation. In the third area, M. H. Diels, comptroller, Arizona Public Service Company, has written some worth-while advice on how to apply work measurement units to the performance of utility employees. For many years the electric utility industry (which is primarily discussed) has employed hundreds of measurement units to determine the various costs of materials, transportation, maintenance, etc. Why not go further and measure employee output as well? This would be fair to the employee, not only by recognizing efficient performance, but also enabling management to reward it proportionately. The technique suggested would create a program which the employees themselves would voluntarily accept and operate in their own self-interest.

WHAT'S WRONG WITH COMMISSION REGULATION? PART II.

In this second instalment of his two-part article on what is wrong with commission regulation, Harry M. Trebing, assistant professor of economics at the University of Nebraska, evaluates the criticisms of commission regulation summarized in his first instalment. He then gives his own conclusions which are to the effect that commission regulation has been an outstanding success and that no suggested alternative could approach its performance. Dr. Trebing was moved to do this article because of the recurrent criticisms of commission regulation as an institution which have grown out of the investigation now going on before the House Subcommittee on Legislative Oversight. His conclusion is not to the effect that commission regulation does not have failures or shortcomings or that it cannot be improved. The author does, however, feel that the accomplishments of commission regulation far outweigh defects to date, and that the emphasis should be put on strengthening and correcting such defects rather than the abolition of commissions per se.



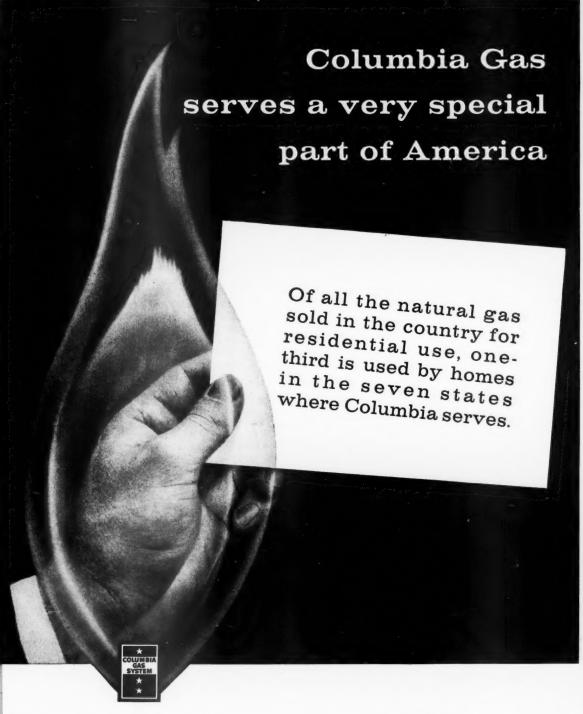
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Eugene J. Keogh U. S. Representative from New York. "Investment companies have been a catalyst because they, for the first time, have provided a medium for the average man of moderate means, to invest a portion of his savings in equity securities. Before the investment company, that average man would have been foolhardy to invest in the stock market without professional advice, and the average man of moderate means can usually not afford such advice."

David L. Lawrence Governor of Pennsylvania. "[Government is] too essential to every phase of our daily lives to be left to the politicians alone. [Government officials] must have the understanding, the co-operation, and the active assistance of every segment of the population, including the business leaders whose talents and abilities can be invaluable . . . As members of commissions and study groups, as members of tax advisory committees, businessmen can participate in government and at the same time help government to reach its decisions."

THOMAS B. CURTIS
U. S. Representative from
Missouri.

"... really what has driven interest rates up and has created this situation of debt management is the great size of the federal debt and the budget deficits. You can help by keeping these appropriation bills down. They are getting larger all the time. That is what you can do if you are really interested in keeping interest rates down. Otherwise, I can tell you, you are just talking a lot of nonsense and about a lot of useless monetary shifting, because it is the size of the federal debt that has caused the trouble in managing it. This causes high interest rates. This creates the pressures that result in inflation."

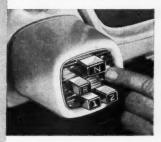
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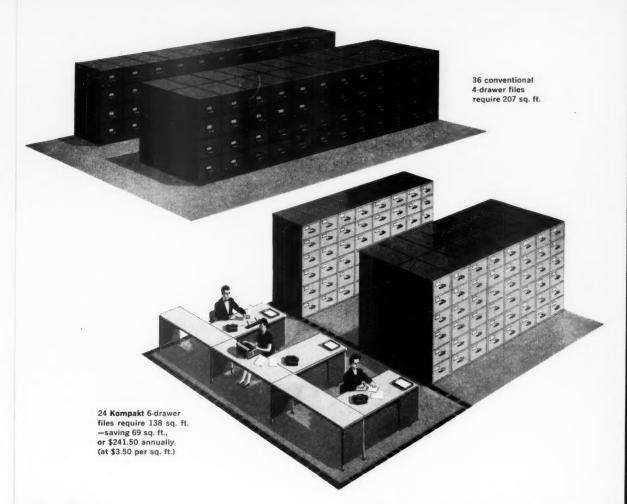
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tion begins annual meeting, Pocono Manor, Pa,

Tuesday-24

Pennsylvania Gas Associa-

Institute of Radio Engineers, Seventh Region, ends three-day technical conference and trade show, Seattle, Wash.

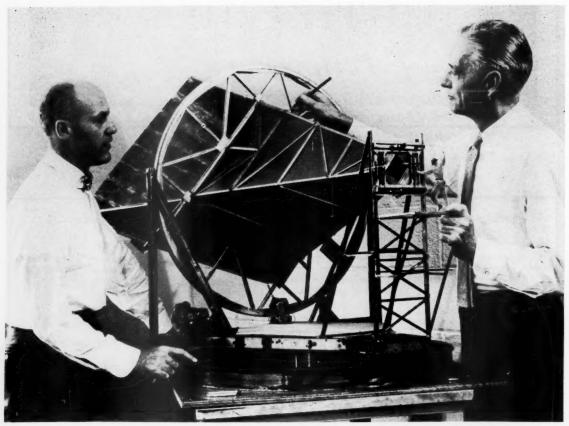
Wednesday—25

Thursday—26

American Society of Planning Officials begins national planning conference, Miami Beach, Fla.

Friday-27

Natural Gas and Petroleum Association of Canada ends two-day annual convention, Niagara Falls, Ontario, Canada.



Ears for Outer Space

Engineers examine scale model of huge horn antenna which will be used to receive signals from satellites in space. Finished antenna will measure 50 feet long, have aperture 20 x 20 feet. (For story of Bell Telephone Laboratories developments, see page 696.)

Circular concrete and metal foundation at right is to be base of rotating structure for horn antenna. Base will measure 30 feet in diameter.



Public Utilities

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The Rate-making Powers of the ICC

By ERIC SCHENKER*

Congress is considering the railroad pricing problem at this time. It has come to be recognized, by economists and others, that continued private operation is at stake. Successive rate increases have only aggravated the railroads' competitive business position. Yet, an analysis of what rate-making power the Interstate Commerce Commission already has is the logical starting point for any attempt to convert the railroads from a monopoly-pricing basis, which no longer has actual validity, to a dynamic competitive pricing system.

The original Interstate Commerce Commission Act of 1887 contained only limited rate-making powers which rested on the monopoly concept. Railroad rates were required to be just and reasonable, but it took a U. S. Supreme Court decision in 1897 (in the maximum freight rate case) to establish the rule that the ICC rate-fixing authority was limited to eliminating rate discrimination, and did not apply to general rate fixing for the future. The commis-

sion's powers were only slightly augmented by the Hepburn Act of 1906, giving it authority to prescribe maximum rates, including joint rates, and to establish through rates. But even this applied only to rates already in effect.

It was not until 1910 that the ICC got some real authority in the Mann-Elkins Act, which included the right to suspend proposed rate increases pending a determination of reasonableness and to institute rate investigations on its own initiative. These successive powers were conferred to protect the public from an ostensible monopoly service.

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By 1920, thanks to World War I, experience had disclosed that the railroads needed some protection, too. The monopoly concept had been shaken by disclosure of economic weaknesses in railroad operation due to overexpansion, technological change, and development of competition from other forms of transportation. The Transportation Act of 1920 was designed to relieve these troubles.

This included the ill-fated § 15a, which directed the commission to fix rates which would enable the railroads as a group to earn a fair return on the aggregate of their property values, and to recapture one-half of the earnings in excess of a prescribed reasonable rate of return between $5\frac{1}{2}$ and 6 per cent.

After nine years had demonstrated that this provision was unworkable, the ICC, in 1931, joined with others in asking for a repeal of the recapture provisions. The resulting Emergency Transportation Act of 1933 not only repealed § 15a but struck out all reference to a fair return on aggregate value.

It set up new rate-making standards requiring the commission to consider, among other factors, the impact of rates on traffic movement, the public interest in low-cost, adequate, and efficient railroad service, and the revenue requirements of carriers to fulfill their public service obligations. This was the last major revision of the law except for additional amendments in 1940 and 1958. The 1940 Transportation Act declared a national policy for all carriers subject to federal law. The 1958 Transportation Act gave the commission authority to consider competition among different kinds of carriers in fixing reasonable

minimum rates. Actually, the ICC ratemaking power was not basically altered.

Interstate Commerce Commission Regulation of Rate Levels

Transportation rate regulation falls into two main divisions, the rate level and the rate structure. Regulation of the rate structure is concerned with particular rates. The rate level has to do with the financial adequacy of rates in general. As one might suspect, these two are closely related since very seldom can a shift in the rate level be undertaken without upsetting the rate structure.

Since the passage of the Transportation Act of 1920 there have been approximately sixteen major general rate increase proceedings, the first of which started right after the enactment of the act. In this case the commission authorized substantial general freight and passenger rate increases intended to offset the increase in carrier operation expenses that had been caused by the general inflation.¹

The next group of general increases came in the thirties and was based on the urgent need of the railroads for revenues to meet fixed charges and to maintain plant in the face of disastrous decline in the volume of traffic caused by the depression.² It is interesting to note that, in all these proceedings, the commission failed to approve a substantial part of the increases requested by the railroads. The commission supported its position by arguing, not only that the

Increased Rates 1920, Ex Parte 74, 58 ICC 220.
 Fifteen Per Cent Case, 1931, Ex Parte 103, 178 ICC 539; Emergency Freight Charges, 1935, Ex Parte 115, 208 ICC 4, 215 ICC 439, 219 ICC 565, 223 ICC 657, 229 ICC 435; Fifteen Per Cent Case, 1937-38, Ex Parte 123, 266 ICC 41.

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proposed rate increases would impede the commerce of the country or would do serious harm to some segment of the economy, but also that they would eliminate traffic or divert it to other forms of transportation. Thus, in these cases, the commission consistently exercised its own judgment and to some extent rejected that of the carrier as to the effect of proposed rate increases on traffic volume and revenue.

THE inflationary period following World War II forms the background of the next series of general rate cases. These cases involved other forms of transportation which had become subject to regulation just before World War II. It has been estimated that in the seven general increase proceedings decided between June, 1946, and October, 1958, the commission has authorized cumulative increases in railroad freight rates averaging about 112 per cent on a national basis.³ In most cases, the rate increases

approved have been designed to meet increases in carrier operating costs. The breakdown of the estimated average percentage increases in freight rates by commodity groups, authorized since June, 1946, is shown in Table I below.

One can see from the average percentage increases granted by the commission that blanket increases of a certain percentage applied to all rates are impracticable. The commission in granting general rate increases has to consider the economic characteristics of the industry; these include various forms of transport, with different cost characteristics, as well as the power of the railroads to discriminate. Thus the commission is faced with the complex task of allowing financial adequacy of rates in general and individual rates which are reasonable per se.

The Rate of Return

Two tests are commonly used in the determination of a fair rate of return. The first is the rate necessary to attract capital, and the second is the determination of the rate of return earned

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TABLE I

ESTIMATED AVERAGE PERCENTAGE INCREASES IN FREIGHT RATES AUTHORIZED SINCE JUNE 30, 1946

Commodity Group	United States 1	Eastern District	Pocahontas Region	Southern Region	Western District 1
Products of Agriculture	95.2	102.5	103.1	97.6	92.1
Animals and Products	116.5	123.8	121.7	115.3	110.8
Products and Mines	86.2	88.3	83.2	84.2	85.0
Products and Forests	116.2	124.3	122.8	122.0	111.6
Manufacturers and Miscellaneous, In-					
cluding Forwarder Traffic	127.3	140.9	132.0	118.8	116.9
Less Carload Traffic	131.5	144.7	135.9	123.2	119.4
Total, All Commodities	112.1	119.0	103.0	108.3	106.7

¹ Does not include effects of extra authorizations for Western Trunkline Zone 1, except as shown on last line

⁸ Ex Parte 162; Ex Parte 166; Ex Parte 168; Ex Parte 175; Ex Parte 196; Ex Parte 206; and Ex Parte 212.

Source: Bureau of Transportation Economics and Statistics, Transportation Economics, Interstate Commerce Commission, November, 1958.

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by other industries in the same locality having the same degree of risk. The question now arises whether the general rate increases have been sufficient to meet both tests.

When one analyzes the rate increases authorized by the commission since 1946, as shown in Table I, and the rate of return earned by carriers, as shown by Table II, this page, one may conclude that the rate increases authorized have kept the railroads' rate of return around 3.7 per cent when calculated as a per cent on ICC valuation. The records further show that the ICC, with one exception, in recent general freight increase proceedings, has not approved the full amount of increase requested by the railroads; but, according to the railroads' calculation, even if the increases had been fully granted, they would not have increased railroad net income sufficiently to

result in a reasonable return on investment compared with other industries.

TABLE III, page 655, shows the ratio of net income to net assets of leading industries, 1940-56. It is obvious that class I railroads have not shared in the general business prosperity of the postwar years. This fact is demonstrated when one compares the ratio of net income to net assets of public utilities and class I railroads. The statistics show that the railroads have not earned a reasonable rate of return compared to other industrial groups.

There is, of course, no pragmatic rule by which one can say if a rate is reasonable or unreasonable. Rather, it is a question of consistently applying sound judgment in the light of all relevant circumstances. The relevant circumstances in this case are the rate of return earned

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TABLE II RATE OF RETURN—RAILWAYS OF CLASS I IN THE UNITED STATES, 1946-57

Year			37 . 73 "	Rate of Return		
	Net Invest- ment 1 (1)	ICC Valuation ² (2)	Net Railway Operating Income (3)	On Net Investment (4)	On ICC Valuation (5)	
	Millions	Millions	Millions	Per Cent	Per Cent	
1946	\$22,577.7	\$20,647.2	\$ 620.1	2.75	3.00	
1947	22.720.1	20,800.7	780.7	3.44	3.75	
1948	23,257.8	21,326.8	1,002.0	4.31	4.70	
1949	23,826.4	21,906.5	686.5	2.88	3.13	
1950	24.310.1	22,408.0	1,039.7	4.28	4.64	
1951	25,055.2	23,206.9	942.5	3.76	4.06	
1952	25,890.6	24,048.3	1,078.2	4.16	4.48	
1953	26,466.6	24,626.9	1,109.4	4.19	4.50	
1954	26,670.4	24.871.5	874.0	3.28	3.51	
1955	26,760.9	24,935.3	1,128.0	4.22	4.52	
1956	27,012.5	25,245.0	1,068.2	3.95	4.23	
1957	27,688.0	•	922.3	3.36		

¹ Average as of beginning and end of year. Includes investment in road and equipment used in transportation service after deducting accrued depreciation and amortization charges, plus material and supply inventories and cash.

Average as of beginning and end of year. Values prior to 1946 not available on comparable basis. Source: Reports of Interstate Commerce Commission, except net investment from reports of railroads to Bureau of Railway Economics.

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Several Angles Posed by Rate Increases

"ONE can see from the average percentage increases granted by the commission that blanket increases of a certain percentage applied to all rates are impracticable. The commission in granting general rate increases has to consider the economic characteristics of the industry; these include various forms of transport, with different cost characteristics, as well as the power of the railroads to discriminate. Thus the commission is faced with the complex task of allowing financial adequacy of rates in general and individual rates which are reasonable per se."



by other public utilities. The railroads must go out into the money market and attract the necessary capital needed for expansion, competing with other public utilities which are earning a greater margin of profit. In order to achieve a more favorable position the railroads have to increase their net railway operating income. General rate increases usually seem like the easy way out. Obviously, general freight increases have not brought the railways' net income high enough. In fact, many economists would argue they have decreased railway net income.

Or course, one may ask how can net profits be increased without raising the general rate level? To answer this question, one must first look for an explanation of why general rate increases have not brought railroad earnings to a favorable position. The original hypothesis of this article can once again be used as an explanation. General rate increases have moved the point of effective com-

petition on vulnerable traffic in favor of other modes of transport. The reason is that the rail structure throughout our history has been built, not on a cost-of-service, but on a value-of-service basis. For example, high rates were set on high-priced products like food, apparel, to-bacco, and spirits, and low rates on heavy bulk commodities like coal, ore, sand, gravel, and cement.

Obviously, while this rate structure worked very well for the railroads when they had a virtual monopoly of transportation, it has worked to their disadvantage in recent years. General rate increases have not solved the railroads' financial problems since these increases have moved a greater percentage of the high-profit traffic to other modes of transport.

The Railway Pricing Problem

THE importance of the railroad pricing problem was recognized by the administration and Congress and the results are the well-known Weeks Report of April, 1955, and the Smathers Subcommittee Report of 1958.

I'v general, the Weeks Report proceeded with these fundamental premises in the reappraisal of the pricing problem:

. . . namely, that the transportation industry operates today in the general atmosphere of pervasive competition; that adjustment of regulatory programs and policies to these competitive facts is long overdue; and that the restoration and maintenance of a progressive and financially strong system of common carrier transportation is of paramount importance to the public interest.⁴

In other words, the committee recognized that regulation is dependent upon the economic characteristics of the industry at any point of time and thus made the following recommendations:⁸

- (a) Maximum-minimum rate control Recommendation—Limit regulatory authority of the ICC to determination of reasonable minimum or maximum rates with no change in existing provisions making undue discriminations and preferences unlawful.
- (b) Suspension powers Recommendation—Continue on a more restrictive basis commission's authority to suspend pro-

posed changes in rates; shorten suspension period to three months; and continue provision that places the burden of proof upon carrier proposing a changed rate, unless the protestant is also a carrier.

- (c) Long- and short-haul clause
 Recommendation Remove requirement that rail or water common carriers obtain prior approval for charging greater than aggregate of intermediate rates, and for charging less for longer than for shorter distances over the same line or route in the same direction, the shorter being included within the longer, if necessary to meet actual competition and the charge is not less than a minimum reasonable rate.
- (d) Volume freight rates
 Recommendation—Make lawful
 such volume rates as are based on
 the cost differences which rates
 are established to meet competition.

A SECOND group of recommendations of the Presidential Advisory Committee which also have implicit rate significance are those which place emphasis on the essentiality of a strong common carrier system. The committee recommends that contract carriage by water and highway be redefined, as being services for hire but "otherwise equivalent to bona fide private carriage." The committee further recommends that the actual, rather than the minimum, charges of contract carriers be filed with the ICC. These proposals were intended to restrict contract and private carriage as much as

⁴ Presidential Advisory Committee on Transport Policy and Organization, *Revision of Federal Transportation Policy*, United States Government Printing Office, Washington, D. C.

⁸ Ibid.

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possible. The committee also recommended the repeal of the exemption from regulation, the services and rates of water carriers with respect to the transportation of bulk commodities. Many transportation economists have pointed out that the second group of recommendations is inconsistent with the first group, since greater freedom was to be given to the carriers subject to regulation; but regulation was to be extended to carriers exempt from regulation.

No positive action was taken on the recommendations of the Weeks Report to solve the railway pricing problem, but the 85th Congress took some action based upon recommendations of a subcommittee headed by Senator George Smathers. The subcommittee's report stated:

The testimony substantiated the subcommittee's concern about the deteriorating railroad situation. As a matter of fact, the incontrovertible testimony revealed that the decline in the railroad position was occurring at a greater rate than the decline in the nation's economy.

It was obvious from the testimony that the railroads are no longer a monopoly in the transportation field. This was dramatically illustrated by the fact that the railroads' share of freight traffic has declined from 74.9 per cent of the total intercity ton miles in 1929 to 48.2 per cent in 1956.

Likewise, the railroads' share of passenger miles declines from 70.7 per cent for the total for commercial car-

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TABLE III
RATIO OF NET INCOME TO NET ASSETS OF LEADING CORPORATIONS, 1940-56

Year	Class I Rail- roads (1)	Manufac- turing Cor- porations (2)	Mining And Quarry- ing (3)	Trade (Retail And Wholesale) (4)	Public Utilities (Electricity, Gas, Tele- phone, and Telegraph) (5)	Service and Construc- tion (6)	Finance
1940	1.8	10.3	5.5	10.5	7.2	7.8	7.9
1941	4.7	12.4	7.8	11.3	6.7	8.8	7.9
1942	8.4	10.1	7.4	9.9	6.2	11.1	6.9
1943	7.8	9.9	7.2	10.1	6.6	12.5	8.0
1944	5.7	9.8	8.0	10.4	6.6	11.3	7.7
1945	3.6	9.3	7.1	10.9	6.7	11.8	7.6
1946	2.3	12.1	9.4	21.9	8.2	19.4	6.4
1947	3.8	17.1	16.0	18.4	8.0	14.2	6.7
1948	5.3	18.2	20.5	18.2	8.6	10.1	8.1
1949	3.2	13.9	12.0	13.4	8.8	9.9	9.1
1950	5.6	17.1	13.2	15.0	9.9	10.4	9.0
1951	4.8	14.4	13.0	11.5	9.0	10.4	7.9
1952	5.6	12.3	10.1	10.1	9.0	11.1	8.2
1953	5.9	12.7	7.9	9.9	9.2	10.5	8.1
1954	4.2	12.3	8.2	9.9	9.3	11.4	8.8
1955	5.6	14.9	13.0	10.9	9.7	12.3	7.6
1956	5.3	13.9	13.8	11.3	9.8	13.2	6.9

Note: Net income is taken as reported, after depreciation, interest, taxes, and other charges and reserves, but before dividends. Net assets include book value of outstanding preferred and common stock and surplus account at beginning of each year.

Source: Problems of the Railroads, Hearings before the Subcommittee on Surface Transportation of the Committee on Interstate and Foreign Commerce, United States Senate, 85th Congress, 2d Session, Part I, p. 53.

riers in 1929 to 34.9 per cent in 1956.6

FROM the testimony the subcommittee concluded that the general deterioration in the railroads' position is due to a number of causes. The most important are: the development of newer methods of transportation that offer intense competition to the railroads; government assistance offered to the railroads' competitors —this includes the building of highways and other facilities for the use of which the railroads' competitors pay little or nothing; and overregulation - the federal government, through the Interstate Commerce Commission, and the vast majority of the 48 states, through state regulatory agencies, supervise and dictate to the railroads, usually under laws and procedures that are ancient and outmoded.7 As a start the subcommittee recommended a study by three experts in the field.

As a stopgap measure pending the outcome of this study the subcommittee recommended the provisions contained in the Transportation Act of 1958.8 The effect of this legislation on particular rate regulation is still uncertain and the outcome of numerous cases pending before the ICC will decide whether the rule of rate making has actually been changed. The writer has already expressed the opinion that the Transportation Act of 1958 did not substantially change the commission's rate-making power under the present law. Another important section of this act dealt with the immediate problem faced by the railroads of securing new capital.

The ICC was given authority to guarantee loans to railroads up to a total of \$500 million. The loans are to be guaranteed only if the commission finds that without the guaranty, the railroads would be unable to secure the necessary funds on reasonable terms.

Policy Recommendation

HE evidence appears clearly to show that changes in rate-making procedures are necessary in the United States. It appears that our present transportation policy is still based upon the assumption which the Weeks Report and the Smathers Subcommittee Report found no longer to be justified—this assumption is that firms which supply transportation services tend to be monopolistic. This assumption materialized with the development of the railroads. As railroad facilities were extended throughout the country and interstate commerce grew, it became apparent that only the exercise of federal authority could satisfy the public demand for the elimination of railroad abuses. The alternatives for public policy were public regulation or public ownership.

The choice which was made was private ownership and regulation. Regulation was necessary to protect the consumer since railroads seemed to show the characteristics of a natural monopoly. Thus, the original program of regulation of transportation in the United States developed from the premise that the firms which supplied transportation services were monopolies. Subsequently railroad regulation was extended to other agencies of transportation, even though the other transportation agencies do not have the same characteristics as railroads. In fact,

⁶ Report of the Subcommittee on Surface Transportation of the Committee on Interstate and Foreign Commerce, *Problems of the Railroads*, April 20, 1958, p. 2.

⁷ *Ibid.* p. 4. ⁸ S 3778 and HR 12488.

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two out of five significant modes of transport—motor and water carriers—exhibit the economic characteristics of highly competitive industries. Nevertheless, the idea persists that the same type of regulation should apply to all modes of transport.

It is true that some of the traffic lost by the railroads is gone forever. Pipelines, for instance, are more efficient carriers of petroleum. The loss of traffic to trucks is, however, another matter. A great part of the traffic now moving by trucks is long-haul traffic, which the railroads could regain if they were allowed to cut their rates to meet truck competition.

Railroad rate reductions, even when compensatory and nondiscriminatory, can

still be suspended by the Interstate Commerce Commission on the grounds that they are in conflict with any objectives of our national transportation policy. This fact was brought out in the discussion of the development of railroad rate regulation, and it seems the Transportation Act of 1958 did little to rectify the situation. The effect of this is that the ICC can still deprive the railroads of their principal competitive advantage of low unit costs for volume transportation, and at the same time deny the public the benefits of this inherent advantage.

To rectify the situation described, the writer would strengthen some of the changes in the rate policies and practices recommended by the Weeks Report. As

Reasons for Railroads' Plight Disclosed

FROM the testimony the subcommittee concluded that the general deterioration in the railroad's position is due to a number of causes. The most important are: the development of newer methods of transportation that offer intense competition to the railroads; government assistance offered to the railroads' competitors—this includes the building of highways and other facilities for the use of which the railroads' competitors pay little or nothing; and overregulation—the federal government, through the Irrestate Commerce Commission, and the vast majority of the 48 states, through state regulatory agencies, supervise and dictate to the railroads, usually under laws and procedures that are ancient and outmoded."



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shown earlier, the Weeks Report indicated that more reliance must be placed on competitive forces in rate making. As a means of implementing this policy, the Weeks Report proposed the revision of maximum-minimum rate control, suspension powers, the long- and short-haul clause, and volume freight rates, so as to restrict the ICC powers over these matters. The writer is not satisfied with the maximum-minimum proposal as proposed by the Weeks Report.

The essence of the report's rate proposal is that the ICC would retain its legislative authority to prescribe rates for the future, but in fixing a minimum or maximum level of rates, the ICC would apply the same standard and tests it now employs, except for the revisions the declaration of transportation policy stated in the report, and the following: (a) the ICC in fixing a just and reasonable minimum rate may not consider the effect of the rate on the traffic of any other mode of transportation, or the relation of the rate to the charge of any other mode of transportation, or whether the charge is lower than necessary to meet competition of any other mode of transportation; (b) the ICC may not fix a reasonable maximum rate which is less than full cost of performing the service to which it applies, exclusive of losses in other services.9

As Professor George W. Wilson stated in a recent article, there is a basic inconsistency in this policy recommendation. He said:

A just and reasonable minimum is

defined as a rate at least equal to or above the direct ascertainable cost and a just and reasonable maximum which the commission can specify must exceed or equal the full cost of performing the service to which such rates apply. In other words, the rate minimum would be marginal cost, and the rate maximum would be equal to or above average total cost. Coupled with the retention of such powers by the commission, however, is the recommendation to repeal one of the most objectionable features of rate regulation; namely, the necessity that the commission substitute its own judgment for that of carrier management as to the effect of the proposed rates on the movement of traffic by the carriers for which the rates are prescribed. Regardless of one's judgment of the merits of these recommendations the point is that they are inconsistent. That is, both the average total cost and the marginal cost which are to guide the commission in determining just and reasonable rates, depend upon the volume of traffic anticipated from the proposed rate change.10

Besides the inconsistency described above, there is some question in the writer's mind in connection with what is the full cost of performing the service. Since present methods of cost allocation are not clear, the writer would advocate changing the recommendation to read that the rates charged by common carriers have to cover marginal costs and that all common carriers would only be

⁹ Revision of Federal Transportation Policy, op. cit., p. 11.

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^{10 &}quot;The Weeks Report Revisited," by George W. Wilson, *The American Economic Review*, March, 1959, pp. 131, 132.

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Inconsistencies of Transport Regulation

REGULATION was necessary to protect the consumer since railroads seemed to show the characteristics of a natural monopoly. Thus, the original program of regulation of transportation in the United States developed from the premise that the firms which supplied transportation services were monopolies. Subsequently railroad regulation was extended to other agencies of transportation, even though the other transportation agencies do not have the same characteristics as railroads. In fact, two out of five significant modes of transport—motor and water carriers—exhibit the economic characteristics of highly competitive industries. Nevertheless, the idea persists that the same type of regulation should apply to all modes of transport."

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subject to minimum rate control. The ICC could only find a proposed or existing rate unlawful if it did not cover marginal costs or was in violation of § 1, 2, or 3 of the act. Sections 1, 2, and 3 of the act protect the public and not other modes of transportation. Of course, this competitive system of rate making would also require the repeal of the Reed-Bulwinkle Act of 1948 which legalized rate bureaus if their rules, regulations, and procedures were approved by the ICC. If we are to have competition, the transportation industry must be subject to the antitrust acts.

Critics of the above proposal will state that the railroads would raise rates on noncompetitive traffic and lower rates on competitive traffic. It is true, the changes advocated would lower rates on competitive traffic, but when one analyzes the tons of revenue freight originated and gross freight revenues, by commodity groups and by commodity, moving by rail, one can only conclude that the railroads could not raise rates in many cases

unless they ignored demand. The bulk of the railroad freight revenues comes from commodities with highly elastic demand schedules.

IN conclusion, one can look for the recovery of the railroad industry, and a strong transportation system generally, if more reliance is placed on the market to determine price. In other words, the power of individual enterprises to exercise monopoly control has been eliminated by the growth of pervasive competition in our transportation industry. Our transportation laws are still designed to protect against monopolistic excesses and there is a misallocation of traffic. To rectify the present situation, the writer has advocated changes in rate regulation which are dependent upon the economic characteristics of the industry. These proposals are a step toward the development of a national transportation policy designed to recognize the inherent advantages of each mode of transportation based on competition. This type of policy will best serve the public interest.

What's Wrong with Commission Regulation?

Part 1. A review of recent criticisms of regulatory commission organization, operation, and procedures.

By HARRY M. TREBING*

Today commission regulation has numerous critics who contend it has performed poorly. They assert many public service companies have become legalized monopolies able to evade or subvert regulation. What are the reasons for alleged commission inadequacy?

By what methods could the regulatory process be improved?

Our present system of commission regulation developed as the result of widespread public dissatisfaction with attempts to control utility and transportation services through franchises, charters, courts and legislatures, and by induced competition. Because these methods often proved too slow and ineffectual, the commission with its greater flexibility and body of nonpartisan experts was hailed as a much more desirable means of compelling private capital

and management to perform in the public interest.

How well the commissions have discharged their responsibility has been a matter of controversy since the establishment of the first modern commission. Much of the criticism, of course, was stimulated by the very nature of the commission's function. Those persons who considered any interference with the sanctity of accepted judicial procedures, private property, or the free play of prices as heretical, could hardly have been expected to greet this new hybrid enthusiastically, for it usurped, at least in part,

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the authority heretofore exercised by these institutions. Nor could the commission expect much sympathy from those who advocated public ownership or from those who wished the state to go still further in protecting the public interest.

However, the volume of criticism directed against the commission system in recent years has far exceeded this traditional animosity and appears to be reaching such proportions that it demands the earnest attention of everyone concerned with the problem of effective regulation, Particularly alarming is the mounting hostility being voiced against the commissions by persons of professional objectivity in academic institutions and in government.

Building on the writings of these critics, we shall attempt to develop a systematic presentation of the substance of (1) current criticism, (2) the reasons given for allegedly poor commission performance, and (3) recommendations for improvement.

Criticisms of Commission Regulation

As an introduction to the discussion of criticisms of commission regulation, it is important to note the general objectives and functions of the commission system, thereby providing some conceptual framework for grouping individual criticisms. Basically, the commission seeks to assure an adequate supply of essential services to everyone at reasonable prices under circumstances where reliance on competitive market control is not desirable. Competition may be undesirable whenever the size of the plant required to serve a given market most efficiently

is so large that it precludes more than one supplier, or when the free entry or exit of firms and intraindustry competition adversely affects the public interest in the quality, cost, and continuity of service.

But when the restraints of competition are gone, it is generally accepted that the unrestricted private firm will endeavor to maximize profits in ways that are inimical to the public interest. Accordingly, as the commission takes over the functions of the market it must be prepared to check three primary evils associated with unregulated private monopoly, notably, artificially high prices, a misallocation of resources, and undue political and economic power. The discussion of commission criticisms may be based on judgments of how well regulation has performed in mitigating these evils. That is, criticisms may be organized around commission ability (1) to control monopolistic profits and pricing through rate making; (2) to assure the effective use of resources; and (3) to control the broader actions and powers of regulated firms.

A STUDY of criticisms of commission rate making indicates that a number of writers believe that regulation has done a poor job as a substitute for competition in controlling both monopolistic-discriminatory rates and excessive profits. Rate making, according to Professor Clair Wilcox, has been neither tight nor continuous, with the result that excessive earnings have not been eliminated nor have profligate expenses been adequately controlled.¹

Edward Renshaw holds much the same view of commission rate making, adding that some evidence of the monop-

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oly return accruing to electric utilities is reflected in the extent to which market values exceed book values for the common stock of firms in this industry.²

Professor Bernard Schwartz, former chief counsel of the Legislative Oversight Subcommittee, makes an even stronger indictment of commission rate making, at least at the federal level. According to Schwartz, rate making has not only been lax, it has become distorted in such a partisan fashion that the commissions take "... the interest of the regulated industry as the 'be all and end all.' " That is, pricing serves the function of complementing the needs of those regulated rather than protecting the public."

However, not all criticisms have been directed at laxity or favoritism. A number of writers have maintained that commission rate making typically takes place without any recognition or knowledge of the scientific aspects of pricing. For instance, rates are said to be set without regard for the elasticity of demand and the consequent impact on consumption and welfare:

Prices are fixed for future sales, but no effort is made to estimate the possible effect of different prices on the volume that can be sold, or the effect of volume on unit costs... when the commissions compute total revenue, they multiply the new price by the old volume. And when they compute earnings, they subtract the old costs. Demand and costs are assumed to be frozen.⁴

To the extent that these charges are valid, it should be noted that the public welfare will be adversely affected in two ways: First, monopoly prices will restrict consumption and therefore bring about a degree of utilization that is not in accordance with the wishes of the public. Second, artificially high monopoly prices will lead to a maldistribution of wealth through a transference of purchasing power from the consumer to the monopolist.

Turning to the question of the effectiveness with which resources (land, labor, and capital) have been employed in the regulated industries, again we find

Regulatory Techniques Tend to Ossify

PERATIONAL deficiencies in the regulatory process are a third major factor accused of contributing to the poor record of the commissions. Operational deficiencies arise, according to Professor Bernstein, as part of the life cycle of commissions. After an early period of struggle, commissions move into periods of maturity during which they seek to develop a procedural uniformity which makes them more judicial and more courtlike. While this results in a greater acceptance by the judiciary, it also tends to ossify regulatory techniques and patterns of behavior, so that the whole machinery of regulation takes on an air of obsolescence as it fails to keep pace with the dynamic change taking place throughout the economy."

a significant number of critics who feel that the record of regulation has been poor and decidedly inferior to the standard of the competitive market.

The use or allocation of resources employed in the regulated industries has been the subject of criticism in two respects. The first is the efficiency with which resources are utilized in terms of output per unit of input. Wilcox notes in this regard that commissions have done little to review or control the efficiency with which management employs resources.⁸ Rather, they have abandoned such problems under the guise of not wishing to invade management prerogatives. But, interestingly, Wilcox doubts that much can be done to correct the situation under regulation unless the commissions carefully scrutinize every expenditure, for the very process of control on a cost-plus basis creates an incentive for profits and surplus gains through overstated expenses and excessive investment. 6 Commissions are thus faced with a dilemma, for unless they duplicate management functions, the motive for gain that leads to cost minimization under competition results in inefficiency under regulation.

THE second aspect of the criticism of resource use deals with the failure to employ resources on a scale commensurate with consumer wishes. Professors Walter Adams and Horace Gray argue that once the regulated firm receives a grant of special privilege through a license or certification, the restrictive investment policy characteristic of monopoly results in a chronic deficiency of productive capacity. Society is then compelled to go beyond regulation to subsidization if it wishes to

expand the scale of output to correct the underutilization of resources. They state:

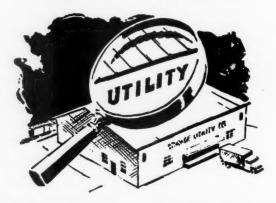
This (subsidization) takes two principal forms—compulsory contributions from consumers and privileged immunity from taxation. In the first, rates are set . . . to provide some increment of new capital for expansion; that is, the police power is used to confiscate a portion of consumers' income and to transfer it to private monopolies . . . for capital purposes. Since, however, commissions have no power to compel investment there is no guaranty that such contributions will actually result in expansion of productive facilities . . . 8

Finally, what of the autonomous power or authority of the regulated firm over time, especially as it relates to the competitive firm? The competitive firm, as it is typically portrayed, has no ability to affect its controlling market other than by altering output—and even this would be insignificant, since it could easily be offset by actions of competitors. On the basis of the critics' comments, however, one is given a far different impression of the regulated utility or transportation company.

Professor M. H. Bernstein argues that the regulated firms eventually come to occupy a position of considerable authority and freedom of action. Once secure from competitive intrusion by regulation, the firm proceeds, with the help of a number of institutional factors, to bring the commission to terms—or even into submission. This accomplished, the utility or transportation company enjoys a position of dominance relative to the means of

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Legalized Private Monopolies



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In summary, the combined opinions of a number of critics would indicate that, in terms of accomplishment, commission regulation has performed poorly with respect to the three criteria which we have selected. An appraisal of the validity of these criticisms will be deferred until Part II of this article in order that we may consider the explanations given for commission performance.

Explanations of Commission Inadequacy

For convenience, explanations of commission inadequacy or failure may be

grouped under four headings: (1) the net imbalance of strength between the regulated companies and the commissions; (2) the political and institutional environment within which commissions operate; (3) operational deficiencies; and (4) inherent weaknesses in the concept of commission regulation.

HE net imbalance of strength refers to the disparity between the resources and power of the commission and those of the regulated firm. Critics cite the inadequacy of commission financing as one of the factors most frequently responsible for the relatively weaker position of the commission, especially at the state level. 11 Yet the causes of the imbalance go deeper than the inadequacy of funds. Professor Gray argues that the commissions themselves aggravated the imbalance by restricting the entry of new firms through grants of special privilege, thereby eliminating a competitive force that could be used to supplement regulation. 12 Professor Bernstein, on the other hand, sees the lack of public interest or support as a particularly significant factor weakening the position of the commission, According to Bernstein, the public tends to equate the establishment of a commission with the solution of the regulatory problem; thereafter public interest or concern declines at a rapid rate. The resultant feeling of apathy is then perpetuated by the technical nature of many of the problems before the commission and the very process of compelling the commission to function as a nonpartisan body divorced from political controversy and interest. 18 The regulated companies also contribute to this general attitude on the part of the public by engaging in advertising and

propaganda campaigns to generate a spirit of good will toward private ownership and management.¹⁴ Thus, although the commission may theoretically exercise the authority to control, in practice, critical opinion alleges that it has neither the resources nor support to control the power or actions of the regulated firm.

THE political environment in which commissions operate is a second factor that has been blamed for their debilitation. Writers differ, however, on the rôle which they ascribe to politics. Bernard Schwartz expresses what is probably the most typical concern; namely, that the commissions (in this case at the federal level) have not been successful in resisting pressures from either the executive or legislative branches of the government. 18 Hence, political decisions are likely to distort what should be nonpartisan determinations of what constitutes the public interest. Bernstein, on the other hand, maintains that it is the very absence of political pressures that weakens the effectiveness of the commissions. Insulation from politics isolates the commission from public attention and support. with the result that commissions tend, over time, to develop a narrow concept of welfare that identifies the public interest with the well-being of the regulated company.16

OPERATIONAL deficiencies in the regulatory process are a third major factor accused of contributing to the poor record of the commissions. Operational deficiencies arise, according to Professor Bernstein, as part of the life cycle of commissions. After an early period of struggle, commissions move into periods of

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maturity during which they seek to develop a procedural uniformity which makes them more judicial and more courtlike. While this results in a greater acceptance by the judiciary, it also tends to ossify regulatory techniques and patterns of behavior, so that the whole machinery of regulation takes on an air of obsolescence as it fails to keep pace with the dynamic change taking place throughout the economy.17 A similar charge against the failure of regulation to keep up to date was made by Joslin and Miller, although these authors concerned themselves primarily with the failure of the commissions to modernize rate-making techniques in accordance with the freedom given by the Hope case.18

OPERATIONAL deficiencies were also brought under fire in the widely publicized resignation of Civil Aeronautics Board Member Louis Hector, who accused the board of slowness, inefficiency, and lack of planning. Lack of planning

has also apparently been of considerable concern to a number of other critics. The objection seems to center on the commission's preoccupation with handling its daily work load without much of an attempt to program or plan for the long-run needs of the public.¹⁹

The final and perhaps most intriguing explanation of commission performance is embodied in the belief that the very concept of commission regulation is premised on a fundamentally incorrect assumption regarding the relationship of control to decision making, which predestines it to failure. Professor Gray is a major proponent of this viewpoint, arguing that commissions endeavor to protect the public interest by exercising restraints that are largely negative and ineffectual, while the power of positive decision making is vested in the management of the regulated firm:

. . . (regulation) is essentially negative

Competition Urged for Utility Industry

MONG the various economic recommendations, those of Professors Gray and Renshaw deserve closest scrutiny. For Gray, the prime objective is the neutralization of legalized private monopoly power. Toward this end the author advocates the promotion of competition in the fullest possible sense. In the field of transportation, restrictions upon entry of new firms would be minimized consistent with public safety, and commissions would be denied authority to grant special privileges. Competition would determine rates, while antitrust laws could be used to assure that competition would be maintained. . . . In the field of electric, gas, and communications utilities, where intraindustry competition is not feasible, Gray calls for the substitution of 'institutional' competition. Institutional competition is defined as competition or rivalry between different forms of utility organization to secure the most efficient service. That is, publicly owned, co-operative, and private facilities, although not serving the same geographic market, would compete."

in character, operating intermittently by restraint and veto against particular private actions that are deemed inimical to the public interest. It can interdict certain acts of private management, but it cannot substitute its judgment for that of private management nor compel positive action in the public interest. The positive functions of management, such as planning, organizing, financing, procurement, technological innovation, marketing, and price policy, are beyond its purview or control, except as in their execution some peripheral violation may occur.²⁰

The result, according to Gray, is that power and initiative are given to those supposedly regulated, while the commission is relegated to the side lines, always mindful that efforts at more direct control are circumscribed by a close web of litigation.

Recommendations for Improvement

THE recommendations for improving regulation stem from the various explanations of its poor performance and are accordingly almost as numerous. Recommendations may be separated into those which deal primarily with administrative-political reorganization of commissions, and those which deal primarily with the economic aspects of regulation.

Administrative-political recommendations aim at correcting the imbalance of power, adverse political environment, and operational deficiencies. The great bulk of these recommendations may be divided into two groups: (1) those which seek to restore the commission to its original form as a quasi-judicial nonpartisan body,

and (2) those which seek to alter substantially the traditional concept and function of the commission. The general legislative recommendations of the Legislative Oversight Subcommittee may be used to illustrate the former group. Briefly, these recommendations are aimed at restoring the commissions as impartial bodies through the establishment of a code of ethics for commission members and practitioners, the prohibition by law of attempts to influence decisions or actions through extrarecord representations, and the empowerment of the President to remove any commission member for neglect of duty.21

At the other extreme are the recommendations of those who seek to change drastically the nature of the commission. The proposals of Bernstein, Hector, and Schwartz may be cited as illustrations.

Bernstein advocates the placement of federal commissions in an appropriate department within the executive branch of the government.22 According to Bernstein, they would then be in a position to develop the broad perspective necessary to formulate national policy and to avoid too close an attachment to particular industries. Also, the secretary of the department would be in a much stronger position to defend commission policy, secure effective co-ordination, and obtain appropriations. In addition, through its position in the executive branch, the commission would be far more responsive to political wishes and general public support, which Bernstein deems desirable. The policy of the review of commission decisions by an independent judiciary would, of course, be continued.

A stronger view of commission reorganization is taken by former CAB Member Louis Hector, who would transfer all policy making, planning, and administrative work to an executive agency. All judicial duties would be transferred to an as yet unformed administrative court, while all responsibility for investigation and research would be transferred to an existing agency such as the Department of Justice. Of course, effectuating Hector's recommendations would emasculate the commission as we know it.

Perhaps the most emphatic of these three writers is Bernard Schwartz, who holds that "nothing less than . . . complete abolition (of the commissions) will be effective." According to Schwartz, political pressures have been a paramount factor in explaining the failure of regulation, and only an administrative court can hope to withstand these pressures to which the commissions have succumbed.

TURNING to the predominately economic recommendations, we find a general desire to introduce the "automatic" control of the market through a



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greater reliance on competition. The plea for more competition is particularly impassioned in the field of transportation, but even with respect to the conventional utilities (electricity, gas, communications), where the limitations of intraindustry competition are fully recognized, there is still a desire to substitute quasicompetitive controls wherever possible. In all cases the recommendations, taken in sum, appear to show little confidence in commission regulation.²⁴

Among the various economic recommendations, those of Professors Gray and Renshaw deserve closest scrutiny. For Gray, the prime objective is the neutralization of legalized private monopoly power. Toward this end the author advocates the promotion of competition in the fullest possible sense. In the field of transportation, restrictions upon entry of new firms would be minimized consistent with public safety and commissions would be denied authority to grant special privileges. Competition would determine rates, while antitrust laws could be used to assure that competition would be maintained. For those transportation services where public ways are provided, such facilities would be expanded to meet the greatly increased traffic which ostensibly would result from competitive rate making.25

In the field of electric, gas, and communications utilities, where intraindustry competition is not feasible, Gray calls for the substitution of "institutional" competition. Institutional competition is defined as competition or rivalry between different forms of utility organization to secure the most efficient service. That is, publicly owned, co-operative, and private

WHAT'S WRONG WITH COMMISSION REGULATION?

facilities, although not serving the same geographic market, would compete.²⁶ The familiar yardstick would be used to evaluate the performance of each type of organization. In instances where neither institutional nor market competition is feasible, Professor Gray suggests public ownership as the remaining alternative.²⁷

RENSHAW indicates three alternatives for improving effective economic control of utilities.28 His first recommendation would grant consumers a voting interest in all firms designated as public utilities. Utility management would then refer significant issues to consumers for decision through municipal elections. The second recommendation would grant consumers the right to buy stock in utilities serving them at a stated price above par, thereby passing the benefits of excessive rates to investing consumers. The third recommendation would convey all common stock in the relevant utilities to their consumers, thereby again passing the benefits consumers; existing stockholders would be compensated by the issuance of preferred stock or bonds carrying a fixed yield.

Summary Comment

In reviewing the criticisms which we have outlined, one cannot fail to be impressed with the unanimity of agreement among the critics cited that commission regulation has performed poorly. From both the explanations for this record and the severity of the remedies suggested, it appears that the casual factors are thought to lie far deeper than individual cases of moral laxity on the part of commission employees, and that the cure cannot be as simple as the enactment of a code of ethics.

Whatever the reader's initial impressions may be, he will doubtless agree that this challenge to commission regulation merits further examination. Part II of this discussion will attempt to make such an examination. However, it is important to note that the ultimate objective of these critical arguments is change, and that all change has both good and bad effects, a fact often omitted by the critics of commission regulation. We shall therefore endeavor to appraise the suggested criticisms and recommendations in terms of the potential benefits and losses should they be accepted by society.

B

Footnotes

1"Public Policies toward Business," by Clair Wilcox, Irwin, New York, 1955, pp. 507, 519, 520.

² "Utility Regulation—A Re-examination," by Edward F. Renshaw, *Journal of Business*, University of Chicago, October, 1958, p. 341.

3 "Crisis in the Commissions," by Bernard Schwartz, The Progressive, August, 1959, p. 12.

⁴ Wilcox, op. cit., p. 507. For a further discussion of the lack of regard for price theory in rate making, see "Price Discrimination in Selling Gas and Electricity," by Ralph K. Davidson, Johns Hopkins Press, Baltimore, 1955, especially p. 152. Also, "The Economics of Competition in the Transportation Industries," by John Meyer, Merton

Peck, J. Stenason, C. Zwick, Harvard University Press, Cambridge, 1959, pp. 178-180.

⁵ Wilcox, op. cit., p. 508.

⁶ Wilcox, op. cit., p. 510. Wilcox distinguishes between transportation, where some incentive for efficiency remains, and public utilities, where rates are set on an individual firm basis. This criticism is directed toward the public utilities.

⁷ Misallocation in this sense is also closely connected with the pricing of utility-transportation services, Rates that are excessively high or discriminatory restrict consumption, thereby distorting the allocation of resources.

the allocation of resources.

8 "Monopoly in America," by Walter Adams and

Horace M. Gray, Macmillan, New York, 1955, p. 56. Privileged immunity from taxation refers to the accelerated an:ortization of new investment by privately owned utilities.

9"Regulating Business by Independent Commission," by Marver H. Bernstein, Princeton University Press, Princeton, 1955, pp. 86-95, 100, 101.

10 Adams and Gray, op. cit., pp. 43, 44.

11 For example, see Wilcox, op. cit., pp. 574, 575. Also, see M. H. Bernstein's testimony in "Monopoly Problems in Regulated Industries," hearings before Antitrust Subcommittee of the House Committee on the Judiciary, Part I—Volume 1, Airlines, 84th Congress, 2d Session, Washington 1057 ington, 1957, pp. 65, 66.

12 See Horace M. Gray's testimony in "Monopoly Problems in Regulated Industries," op. cit., pp. 78,

18 Bernstein, "Regulating Business by Independent Commission," op. cit., pp. 82-84. Also, "Monopoly Problems in Regulated Industries," op. cit., pp. 60, 61.

14 Bernstein, "Regulating Business by Independent Commission," op. cit., pp. 98, 99.

15 Schwartz, op. cit., p. 13.

18 Bernstein, "Regulating Business by Independent Commission," op. cit., p. 101.

17 Ibid., Chapter 3. A somewhat similar picture of the decline of commission regulation is given by Samuel P. Huntington in his analysis of the "marasmus," or wasting away, of the Interstate Commerce Commission. See: "The Marasmus of Commerce Commission. See: "The Marasmus of the ICC: the Commission, the Railroads, and the Public Interest," by Samuel P. Huntington, Yale Law Journal, April, 1952. pp. 467-509.

18 "Public Utility Regulation: A Re-examina-tion," by G. Stanley Joslin and Arthur S. Miller, Virginia Law Review, November, 1957, pp. 1072-

19 Business Week, October 10, 1959, pp. 45-50. For an extensive attack on the lack of commission planning, see "The Economic Planning Function under Public Regulation," by Leland Olds, American Economic Review, Papers and Proceedings, May, 1958, pp. 553-561.

20 "Monopoly Problems in Regulated Industries,"

op. cit., p. 79.

²¹ Independent Regulatory Commissions. Report of the Special Subcommittee on Legislative Oversight of the House Committee on Interstate and Foreign Commerce. House Report No. 2711, 85th Congress, 2d Session, Washington, 1959, pp. 9-11. The subcommittee also makes extensive recommendations for the individual federal commissions, all of which are largely consistent with the accepted concept of commission regulation.

23 "Monopoly Problems in Regulated Industries,"

op. cit., pp. 70-72.

28 Schwartz, op. cit., p. 13.

24 The number of writings in this category far exceeds the space available for summarization and comment. In addition, there is a considerable variation in the quality of analysis and the clarity of conception with regard to what constitutes workable competition. For a representative sample of able competition. For a representative sample of better works, in addition to those discussed in this article, see: "The Rôle of Competition in the Regulated Industries," by Walter Adams, American Economic Review, Papers and Proceedings, May 1958, pp. 527-543; "Improving National Transportation Policy," by John H. Frederick, American Enterprise Association, Washington, 1959; Meyer, Peck, and others, op. cit., Chapter 9.

Interestingly, one of the most stalwart advo-

Interestingly, one of the most stalwart advo-cates of competition, the late Professor Henry Simons, doubted the wisdom of attempting to control utilities and railroads either by competition or commission. Instead, Simons advocated socialization in these areas. See "Economic Policy for a Free Society," by Henry C. Simons, University of Chicago Press, Chicago, 1948, pp. 83, 86.

25 Adams and Gray, op. cit., p. 60. 26 Ibid., pp. 70, 71; also, "Monopoly Problems in Regulated Industries," op. cit., p. 81. 27 Adams and Gray, op. cit., pp. 58, 59.

28 Renshaw, op. cit., p. 343.

PART II of this article will appear in the next issue of the Fortnightly.

Megawatts versus Milliwatts

A CORRECTION is in order to remove any confusion on the part of our readers which may have been engendered by a typographical error which appeared in the April 28th issue of PUBLIC UTILITIES FORTNIGHTLY in the article "Obsolescence versus Tax Depreciation for Electric Utilities," by C. P. Guercken. Inadvertently, the manuscript abbreviation "'Mw" was spelled out in type "milliwatt" instead of "megawatt," which appears several times in the course of Mr. Guercken's article-specifically, on pages 587, 590, and 591. It should have been megawatt in every instance.

Let's Not Kill the Goose That Lays the Golden Eggs



By JOHN D. GARWOOD*

The economic theorists—the Socialists—would blindly place the control of our lives in the hands of an omnipotent government. They ignore the fact that this would kill private enterprise, destroy personal initiative. Socialism is a confessed failure in Great Britain. In West Germany, by employing simple democratic methods of free markets, profit incentives, and encouragement of new ideas, a postwar economic miracle has been achieved. The record speaks for itself. It should forever silence proponents of the planned state, the paternalistic government.

THE socialist scheme of the good economic life is not new. The belief that a millennium can be brought into being by some "combination of lawyers, business and labor managers, politicians, and intellectuals" is hard to believe. Thus, the belief is that society can be made more free and equal, more orderly and prosperous by a state apparatus which takes charge of the economy, and runs it according to a plan.¹

As many writers have pointed out (Friedrich A. Hayek, the "Road to Serfdom," in particular), a state apparatus which plans and runs a country must have the authority of a business executive; i.e., authority to direct completely the lives of the component parts of the whole. This is an authoritarian state. It may not want to be, but when that great allocator, price and profit, is removed, a force which makes men want to move in economic areas, then the state must substitute a motivating force equally powerful if production is to take place. This force is obviously the raw coercion of the state.

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^{1&}quot;Reflections on the Failure of Socialism," by Max Eastman, Devin-Adair, New York, 1955, Chapters 1-4.

Where the major economic decisions are in the hands of the people as a whole, then control rests in the hands of the market. A man votes in the economy by purchasing—his money represents a price ballot. The casting of these many ballots in turn influences price and governs the products which that economy will tolerate to be produced. The market is the only mechanism which assures freedom. Where the state allocates, its choice of alternatives means coercion for those living in that state.

Economic Power Begets Political Power

WILHELM ROEPKE puts it well, "It is hardly forgivable naïvete to believe that a state can be all-powerful in the economic sphere without also being autocratic in the political and intellectual domain and vice versa. . . . It therefore makes no sense to reject collectivism politically, if one does not at the same time propose a decidedly nonsocialist solution of the problems of economic and social reform. If we are not in earnest with this relentless logic, we have vainly gone through a unique and costly historical object lesson."

Max Eastman, in his now famous recant of socialist doctrine, puts it this way:

However, our American creepers toward Socialism are most of them less bold and forthright than that. Often they don't even know where they are creeping. They see with the tail of an eye that political liberty is incompatible with economic subjection, but they refuse to look straight in the face of this fact. They refuse to learn the lesson that the history of these last

thirty years has been spread out on the table, it almost seems, to teach them. They remain indecisive, equivocal—lured by the idea of security, orderly production, and universal welfare under a planning state, yet not quite ready to renounce in behalf of it those rights and liberties of the individual which stand or fall with the free market economy.

An ironical truth is that these socializers will not achieve security, orderly production, or the prosperity that makes universal welfare possible, by sacrificing freedom. They will be duped and defeated on all fronts. For me, that also is proven by the history of the last three decades. But that is not the theme of this chapter.

Its theme is that our progress in democracy is endangered by democratic enthusiasts who imagine that they can preserve freedom politically while hacking away at its economic foundations. More even than the fellow travelers with their vicarious flair for violent revolution, or the Communists with their courageous belief in it, these piously aspiring reformers are undermining our hopes. Yearning to do good and obsessed by the power of the state to do it, relieved by this power of their age-old feeling of futility, they are destroying in the name of social welfare the foundations of freedom.

Arthur Koestler warned us some years ago against the "man of good will with strong frustrations and feeble brains, the wishful thinkers and idealistic moral cowards, the fellow travelers of the death train." We have accepted his warning. At least we have

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learned the meaning of the word fellow traveler, and are no longer falling in droves for these unlovely accomplices of the tyrant.

We must arm our minds now against the less obvious, the more strong and plausible and patriotic enemies of freedom, the advocates of a state-planned economy. They are not on the train and have no thought of getting on, but they are laying the tracks along which another death train will travel.²

Capitalism

o sum it up, under private Capitalism the individual rules supreme. The consumer through his purchases of what he wants determines what will be produced. This in turn is reflected back, determining amounts of capital, labor, and materials directed to production. Only if a product is wanted as indicated by its sales, will it be able to command a price sufficient to pay for its costs. The market, not the government, is the determinant of success. The government plays a subsidiary rôle, providing protection, and will provide goods and services which cannot be adequately provided by the private segments of the community.

Capitalism brings with it political democracy; indeed, Capitalism and political democracy are dependent upon one another

Capitalism is based upon the creative instincts of the people. Unlike Socialism, where official error once made will intensify in effect all through the economy, an error in Capitalism will be caught through the profit mechanism and quickly adjustments will be locally applied.

Capitalism is responsive to change. Indeed, it breeds change and innovations for the reward is there for the innovator. Under Socialism change comes through bureaucratic decision. Under Socialism rewards for change are limited, whereas under Capitalism the creative instincts of the individual find challenge on every hand. And—the more creative a society, the greater its wealth. We cannot consume what we do not produce. Capitalism is dynamic, alive, adventurous. It has proved unmatched in exploiting new opportunities, new resources, developing new techniques.

Communism is capable of producing a Sputnik by channeling all resources to the task at the expense of everything western civilization holds essential. Herein lies its challenge to the western world and the western pattern of thought.

⁸ Max Eastman, ibid., Chapter 3.



Socialism and the Theoretician

Socialism, as it has presented itself in Europe and England since World War II, has been an eye opener of great magnitude for those most closely held to it; namely, party theoreticians and government officials whose duty it has been to carry out socialist dicta. The experience of those in the high and low socialist hierarchy ought to be a must reading for every academician, government official, and business person in the U. S. Let us examine the theory and practice of Socialism in the West since the war.

Professor W. Arthur Lewis, leading theorist in the British Labor party and highly respected for his views among Socialists of Great Britain, in 1955, in a series of two articles in the magazine Socialist Commentary, critically appraised the British experience with Socialism. It is worth our while to quote from Professor Lewis. His comments were prophetic of the 1959 election in Great Britain.

On worker ownership of industry he had this to say:

... What has been done ... is to transfer property not to workers but to the government. Workers continue to be employees, subject to all the frustrations of working under orders in large undertakings. ... Those who expected nationalization to raise wages have ... been disappointed. ... It does not solve the problem of labor relations; it reduces private wealth in importance, but only gradually; it raises unsolved problems of control;

and it raises the issue of how much power we want our governments to have.

Socialist dogma calls for control and direction of private industry. In this area Professor Lewis points out that

unnecessary . . . they put the whole population at the mercy of government clerks, applying for rations, for licenses to redecorate, for licenses for petrol, and what not.

To the Socialist taxation is primarily a weapon of control and that control makes for a leveling process. Thus:

We have pushed progressive taxation so far in this country that . . . we are in danger of destroying the incentive to take risks. Nobody will take risks involving a large possibility of loss unless there is correspondingly a large possibility of gain. If we make large gains impossible we stifle enterprise.

THE Labor party, which came to power in Great Britain after World War II, gave short shrift to profit as a salutary motive for human welfare, economic growth, and progress. It is of interest to note this re-evaluation which has been made by Socialist theoretician Professor Lewis:

We have to be very careful not to live beyond our means. . . . There must be restraint in consumption. Money wages must not be increased by 10 per cent every year because

LET'S NOT KILL THE GOOSE THAT LAYS THE GOLDEN EGGS



The Consumer

Lays the Golden Eggs

"TO sum it up, under private Capitalism the individual rules supreme. The consumer through his purchases of what he wants determines what will be produced. This in turn is reflected back, determining amounts of capital, labor, and materials directed to production. Only if a product is wanted as indicated by its sales, will it be able to command a price sufficient to pay for its costs. The market, not the government, is the determinant of success. The government plays a subsidiary rôle, providing protection, and will provide goods and services which cannot be adequately provided by the private segments of the community."

productivity does not increase by more than 2 per cent a year.

Our forefathers never bothered about economic progress.... Now we are conscious that it requires among other things a high level of investment which in turn also means restraint in consumption. Worse still: In private enterprise economy most saving comes out of profit and most investment is done only if there is the incentive of profit. So if we want large investment and a rapidly rising standard of living we must have a high profit ratio.

It is traditional to our party to burst a blood vessel whenever the word "profits" is mentioned. To demand that wages should be restrained so that profits should be high is clearly sacrilegious language. But since this is clearly the situation in which we find ourselves we have to face it.

H is views on state ownership of property are strongly stated:

Do we really want to transfer too much power to the government of the day? Ours is the party of the people; a government machine in which all property and opportunities of employment are concentrated is really a totalitarian rather than a Socialist conception.

As to the future of Socialism, Lewis concludes:

Some party members . . . just keep on demanding the old mixture as if we

were still back in the good old days of 1900... by and large it is the intellectuals of the party who refuse to think about its problems... Our task is not to hold the generation of 1900 but to win for our movement the loyalty and enthusiasm of the young men and women of today and the future.

Thus speaks this British theoretician who has concerned himself with socialist theory and practice in Great Britain for a decade. It appears that a decade of experience was worth a lifetime of theory.

Britain and West Germany— A Contrast

A VERY meaningful and well-documented study was made by Professor David McCord Wright of McGill University of the economies of Great Britain and West Germany since World War II, a study published by the American Enterprise Association. Professor Wright's study has received considerable attention since it first appeared. The "Monthly Bank Letter" of the First National City Bank of New York devoted a portion of its March, 1958, letter to the findings.

British Socialism versus West Germany Incentive Methods

PROFESSOR Lewis has rejected British Socialism on both theoretical and practicable grounds. The Wright study is a contrast between where free enterprise has been utilized and where Socialism has been relied upon to maximize a nation's welfare.

Professor Wright notes that

. . . We have a most interesting test case of the effect upon the condition

of the poor of a relatively free market economy as against one heavily paternalistic, controlled, and subsidized. Offhand, the deeper concern of labor Socialists and to some extent, of the present U.K. economy with the condition of the poor would seem to be the fastest way to raise the income level of the lower-income groups. But it hasn't worked out that way.

The economic choice faced by Western Germany, after the currency reform and granting of substantial autonomy in 1948, was a basic one. Had she followed the prevalent European and U.K. labor pattern, she would have gone in for heavy control, rationing, state-directed investments, sharply progressive taxation, tremendous emphasis on equality.

Instead, her policies were entirely different. Emphasis was placed upon incentive rather than literal equality, upon a free market rather than planning, upon modernization rather than routine. . . .

THE experience of West Germany has often been referred to as the "German Miracle." Thus, after adjusting for changes in the price level, real wages in West Germany increased 99 per cent between 1948 and 1957. On the other hand, during this same interval of time, real wages increased only 11 per cent in the United Kingdom.

In terms of industrial production, in Western Germany from 1948-57 increases amounted to 254 per cent while in the United Kingdom (1947-57) the increase was 70 per cent.

Per capita output in Germany in-

LET'S NOT KILL THE GOOSE THAT LAYS THE GOLDEN EGGS

creased 115 per cent from 1947-57 against 15 per cent in Great Britain. Further, between 1954-57, in real terms, gross national product rose 25 per cent in Germany as contrasted with an increase of only 4 per cent in Great Britain.

THE population of West Germany and the United Kingdom is roughly the same—51 million. Yet in West Germany as many houses were built from 1951-57 as from 1947-57 in the United Kingdom.

In 1948 West German output of cars numbered 30,000, British output was 328,000. In 1957 German output totaled 950,000, United Kingdom 850,000.

In world trade by placing an emphasis upon high quality with attractive prices, from 1945-56 West Germany advanced its share from 2 per cent to 8 per cent of world trade. During this same interval the United Kingdom's share declined from 12 to 10 per cent.

In the field of currency the success of West Germany is striking. In gold and gold exchange holdings, starting from scratch, these reserves have mounted to over \$6 billion, more than twice those of the United Kingdom.

The German mark has been made secure. It is recognized as one of the most stable of all world currencies. This is due in good measure to a restraint of governmental spending which has gone far in preventing inflation. In addition, credit was stringently restricted thus preventing excess borrowing. Cost of living in Germany rose 18 per cent since 1950, in Great Britain 44 per cent.

In the field of taxation Professor Wright points up the rôle of the income tax as a contributory factor in this rapid recovery. After the war German tax rates reached as high as 95 per cent, although particular exemptions for saved and invested income blunted these figures. Starting in 1950 these rates were revised downward until top rates were around 55 per cent. In Great Britain the top rate had been maintained at 92½ per cent.

The impact of this lowered tax rate on investment is evident. Investment tripled in West Germany between 1949-56. In the United Kingdom during this identical interval investment increased by 50 per cent.

Dr. Robert G. Wertheimer of Babson Institute, in reporting on the postwar German tax structure before the House Ways and Means Committee, noted that

Not only did the economy grow more rapidly than ever in a climate of stable prices but total public revenues also expanded and secured a balanced budget. Income tax reductions set free entrepreneurial initiative which

"WHERE the major economic decisions are in the hands of the people as a whole, then control rests in the hands of the market. A man votes in the economy by purchasing—his money represents a price ballot. The casting of these many ballots in turn influences price and governs the products which that economy will tolerate to be produced. The market is the only mechanism which assures freedom. Where the state allocates, its choice of alternatives means coercion for those living in that state."

created a flexible economy providing full employment—in spite of the influx of 10 million destitute persons-steadily rising standards of living and a rapidly growing domestic and foreign investment.

Taxpayers again could show their incomes and profits without fear of seeing most of them taxed away. The lowering of the tax rates rapidly increased the ability of all classes to save. Institutionalized saving, for example, increased from 4 per cent of disposable income in 1950 to 8 per cent in 1955. Business saving in the form of retained profits and depreciation allowances rose even more rapidly. These savings made possible the financing of the German reconstruction without inflation.

The lesser dependence of the federal government on the personal income taxation as source of tax revenues also solved the plight of the small businessman by permitting him to keep most of his gross profits as seed capital for expansion. The lower income tax burden stimulated the general willingness and ability for people to take risks and to establish new business or to expand existing ones. Wage earners and the professions also became more productive and were eager to work longer hours, overtime, and on outside projects to expand incomes that would accrue to themselves.

Other Striking Contrasts

In the field of labor relations and labor productivity Professor Wright found a striking contrast between West Germany and the United Kingdom. Thus,

in West Germany he observed little union sabotage of new methods of production while in the United Kingdom he comments on slackness of workmanship, lack of enthusiasm for the work.

Professor Wright calls attention to the difference in the "social attitude" between West Germany and the United Kingdom. "A famous English scientist once summed up the difference between a Socialist and Capitalist in the following terms: 'A Capitalist,' he said, 'is a man who if he himself is living well, doesn't mind if others are living better. A Socialist, on the other hand, is a man who doesn't care how badly he himself is living as long as nobody else is allowed to live better.' Possibly, in the difference in the two attitudes indicated here, one may see something of the basic reasons for the German Miracle."

The two Germany's in Europe today are in startling contrast. In West Germany the standard of living is at an alltime high, considerably above the prewar level. In East Germany the standards are prewar and labor productivity is but a fraction that of West Germany.

IX/ITHIN West Germany itself changes in socialist attitudes are revealing. Initially, the successes of West Germany under free enterprise were termed "artificial, built upon sand." The working people, however, sand or no sand, enjoyed the standards of living not previously available under the Nazis régime, and, the abundance continues. This made believers of veteran Socialists. The East-West German contrast was and is even more revealing.

A new political formula has consequently come into socialist doctrine in

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West Germany. Briefly stated it runs like this: Free competition where possible, economic planning only where necessary, public control of the free market system against cartels and monopolies, and concentration of economic and political power.

The Socialists have supported the free market policies more frequently in West Germany than the nonsocialist parties themselves.

In Great Britain today the picture is similar. Polls indicate that 85 per cent of people there are against nationalization of industry. Among Labor party members the figure is 75 per cent. The fact that there is a greater concern in British industrial circles for security of workers and the diastrous failures of the nationalized industries are largely responsible for this change of heart of the British people in the last decade.

Conclusion

The lesson in Europe seems clear. Let us not kill the goose that lays the golden eggs. Hilaire Belloc puts it well, "The control of the production of wealth is the control of human life itself."

Nearly two hundred years ago in northern Scotland the famed Scot, Adam Smith, father of the free enterprise idea, stated it clearly for all to read:

The statesman who should attempt to direct private people in what manner they ought to employ their capitals, would not only load himself with a most unnecessary attention, but assume an authority which could safely be trusted to no council and senate whatever, and which would nowhere be so dangerous as in the hands of a man who had folly and presumption enough to fancy himself fit to exercise it.

THE Britishers had a taste of radical social planning under their Socialists. But the choice seemed to be more regimentation to make it work, or more freedom and a return to a nonplanned order. With its strong, 900-year-old continuity of British life, that nation has taken the choice of freedom, returning to stability and tradition. . . . Our American traditions were the traditions of Britain for many generations and our republican divergence in 1776 brought far fewer changes in basic ideas than it retained.

"Indeed, both many Englishmen of the time of our revolution as well as many Englishmen since have believed our revolt was a revolt of an outraged English society against a German authoritarianism which had unfortunately gained control of Britain through George III and the House of Hanover. Our revolt is sometimes considered part of a parliamentary revolt that was under way in Britain, and thus is credited with helping return Britain to its own traditions.

"And there is a modest parallel with today. Already, in the U. S., there has been a marked turning away from the theories of the planned society, though there are still strong spokesmen for it."

—EDITORIAL STATEMENT, The Wall Street Journal.



Washington and the Utilities

FPC Inquiry Broadened

House investigators disclosed they are checking other gas rate cases involving possible off-the-record approaches to the Federal Power Commission. Representative Oren Harris (Democrat, Arkansas) reported the broadened inquiry into the FPC in announcing that Thomas G. Corcoran had agreed to testify on his private talks with three commission members, on hearings slated to open May 2nd.

Representative Harris said that Mr. Corcoran, a one-time member of President Franklin D. Roosevelt's brain trust, and FPC Members William R. Connole and Arthur Kline had told him "they would gladly appear and testify." Mr. Connole, Mr. Kline, and Jerome K. Kuykendall, FPC chairman, have acknowledged that Mr. Corcoran approached them privately on a pipeline case last fall. However, they denied any impropriety and have stated that Mr. Corcoran did not influence them in their decision to grant the Midwestern Gas Transmission Company's application to pipe gas from Canada into the upper Midwest.

The principal issue in the case is the commission's decision to leave undecided for the time being the rate of return the company should be allowed on its investment. The company asked 7 per cent. A staff paper recommended $6\frac{1}{4}$ per cent. Mr. Kuykendall has said the decision was the first time the rate of return was left open for determination in a rate case.

Representative Harris noted in his announcement about the FPC that Gardiner Symonds, chairman of Midwestern Gas and its parent company, Tennessee Gas Transmission Company of Houston, stated last month that there was nothing improper about Mr. Corcoran's conduct. Mr. Symonds had told Tennessee Gas stockholders that Mr. Corcoran's rôle had been "misunderstood in many quarters" and that there had been nothing secret about Mr. Corcoran's talks with the commissioners. He asserted Mr. Corcoran's relations were in "full compliance" with law and the practice of the FPC.

THERE probably will now be an effort made by the committee to ascertain whether there is a pattern in past gas cases of ex parte contacts similar to those

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made prior to the Midwestern Gas decision. At the hearings scheduled to open May 2nd, Corcoran, as well as FPC Commissioners Connole and Kline, will be given the opportunity which they requested to explain their contacts with Corcoran.

It was indicated recently that Connole would not be renamed for another term on the commission, but the administration's decision on that has nothing to do with the ex parte contact incidents. It was believed in some quarters to be part of an informal agreement with Democratic leaders to reach a better partisan balance on some commission memberships in return for prompter senatorial confirmation of administration appointments.

States to Get Some Atomic Controls

THE U. S. government will shift control of certain radioactive materials to those states ready and willing to exercise it. Last September Congress authorized the move, which was designed to relieve the Atomic Energy Commission of much responsibility in the field of radiation safety. The fifty governors of the states were sent 29 proposed criteria by AEC for assumption of regulatory authority over radioactive by-product materials, source materials such as uranium and thorium, and atomic fuels in amounts less than needed to make a bomb or power a reactor.

The law permits states to obtain control only through agreements with the AEC, which must be satisfied that they have programs adequate to protect the public health and safety. The AEC will continue to control nuclear materials used in reactors and weapons. States willing and able to take over controls for radia-

tion safety, which would include authority to issue licenses, make and enforce rulings, are California, Connecticut, Illinois, Massachusetts, New Jersey, New York, Ohio, Pennsylvania, Tennessee, and Texas. The AEC reports that there are 10,000 licenses outstanding for use of radioactive materials involved in the proposed transfer. Of these, 60 per cent are held in the ten states mentioned.

Transco Case to the Supreme Court

O^N April 11th the U. S. Supreme Court agreed to review the Transcontinental Gas Pipe Line case. The issue at stake is the Consolidated Edison Company's proposal to purchase natural gas directly from Texas producers to fire electric-generating facilities in the New York city area. The third U. S. circuit court of appeals had reversed the Federal Power Commission after the latter had refused Consolidated Edison's request on the grounds, among others, that the proposed 194 cents per thousand cubic feet of gas would drive up gas prices in the entire area. The FPC has no direct control over prices of natural gas where bought directly from the producer by the user. However, in this case FPC approval is needed to permit the transportation of the gas.

The "inferior" versus "superior" use of natural gas is probably the most important issue of significance to the entire natural gas industry. This involves the question of whether residential use of gas should have priority over its use as boiler fuel as a matter of public interest and conservation of an irreplaceable natural resource. The third U. S. circuit court of appeals, in reversing the FPC, ruled that the commission had no power to deny

authority for the transportation of gas simply because of the so-called "inferior use" (boiler fuel) intended. The lower court ordered the issuance of a certificate. It is this action which the highest court has agreed to review. Arguments before the court will commence during the October term and no decision is likely until the winter months.

A New Desalting Process

ACCORDING to W. L. Badger Associates, a new evaporation process has been developed capable of desalting water as cheaply as 35 cents per thousand gallons. Fresh water is produced under this process by connecting a series of 12 evaporator units so that condensing steam from one unit heats sea water in the next units. One of the most troublesome problems in the evaporation has been accumulation of scale on the evaporator tubes. With the new method incoming scale is deposited on suspended scale particles rather than on the metal evaporator tubes. A thickener removes these suspended particles from the concentrated waste sea water and these particles will then again be mixed back into incoming sea water. The incoming water is also deaerated since it has been found that oxygen contained in such water is one of the chief causes of corrosion.

Although a million gallons-a-day plant, soon to be built, will produce fresh water in the order of \$1 per thousand gallons, it is estimated that a plant ten times that size could bring the cost down to 35 cents a thousand. Secretary of Interior Seaton stated that the nation will have to "turn to the ocean for water by 1980." Speaking last month to the seventh National Watershed Congress in Washington, D. C., Seaton expressed "great hope" that

a cheap method of removing salt from ocean water would be developed and he noted the legislation enacted by Congress which will permit the building of five pilot plants. The Badger Associates plant at Freeport, Texas, will be the first of five large plants built under this congressional authorization.

CAB Chairman Confirmed As Judge

THE U. S. Senate on April 20th overwhelmingly approved President Eisenhower's nomination of James R. Durfee, chairman of the Civil Aeronautics Board, to be a judge on the United States court of claims. The 69-to-15 vote was a defeat for Senator William Proxmire (Democrat, Wisconsin), who told the Senate Mr. Durfee was disqualified for the judgeship because of his lack of experience and alleged violations of the CAB code of ethics. All fifteen opposing votes came from Democrats. Senator Proxmire said Mr. Durfee, who also is from Wisconsin, showed "a pattern of developing moral weakness" by accepting free air trips abroad and a North Carolina golfing week end as a guest of airlines he was charged with regulating.

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But Mr. Durfee received support from Democrat and Republican leaders alike. Those speaking on his behalf included Senate Republican Leader Everett M. Dirksen (Illinois); Senator A. S. Mike Monroney (Democrat, Oklahoma), chairman of the Senate Aviation Subcommittee; Senator James O. Eastland (Democrat, Mississippi), chairman of the Senate Judiciary Committee; and Senator Proxmire's Wisconsin colleague, Senator Alexander Wiley (Republican).

All praised Mr. Durfee as a man of integrity, whose thirty years of experi-

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ence as a lawyer and on Wisconsin and federal regulatory agencies well qualified him for a place on the claims court. They defended his acceptance of free inaugural flights to Mexico City and Rome on the ground that CAB members traditionally accepted such invitations from airlines as a means of meeting and discussing mutual problems with their foreign counterparts.

SENATOR Dirksen disputed Senator Proxmire's contention that Mr. Durfee should not have accepted an invitation from two airlines to a combined golf-and-business week end at Pinehurst, North Carolina.

"What's wrong with golfing?" Senator Dirksen asked. He said members of regulatory agencies like the CAB should not be "confined to a cubbyhole" and cut off from the business firms they must regulate.

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Cheaper Airmail Criticized

THE Post Office Department's plan for shipping more first-class mail by air anywhere in the nation will soon be passed upon by the Civil Aeronautics Board. Postal officials contend such a nation-wide system of sending first-class mail by air on a "space available" basis would greatly improve postal service. But both the airlines and the railroads oppose

the idea. The airlines say the rates they must charge are too low; the rails complain it will reduce their volume of business.

The rates for this special air service set by the CAB—are lower than the rates the Post Office pays for regular airmail transportation. But under it the airlines can refuse to carry the first-class mail provided they have no empty space, whereas regular airmail has top priority at all times. The airlift program for firstclass mail already has been used successfully by the Post Office on a limited scale. That is why it feels an expansion of the method would be worth while. Last month the CAB gave the Post Office permission to expand the airlift to include 18 additional routes on a tentative basis until it had time to rule on the request for nation-wide authority.

FCC Orders Western Union to Submit Divestment Plan

THE Federal Communications Commission has ordered Western Union Telegraph Company to offer a plan for divesting itself of its international cable operation by June 8th of this year.

Congress ordered Western Union to rid itself of its ocean cable system when the company merged with Postal Telegraph in 1942. Several plans have been presented since that time but none of them has gone through. Under a plan now pending Western Union would turn its ocean cable system over to Barnes Investing Corporation of Chicago; however, the FCC has said that it appears the Barnes Corporation has not as yet succeeded in raising the necessary funds for the purchase.



Telephone and Telegraph

AT&T Record Expansion Plans

REDERICK R. KAPPEL, president of American Telephone and Telegraph, has announced that during the present year a record \$2.6 billion will be spent on expansion. This figure represents the largest sum ever expended by an American business firm for expansion of its facilities.

More than 11,200 share owners turned up at the New York city meeting on April 20th to hear Mr. Kappel's report on the world's biggest utility. Hopes of many stockholders were dashed when he announced that the \$3.30 annual dividend would not be increased at the present time. He stated, "We have never favored an up-and-down dividend policy and we are no more disposed to that now than we ever have been." He noted that it had only been a year since the last increase and that it had not been long enough to tell what the future might hold. Earnings for the current year would be in the neighborhood of the 1959 figure-\$1,-148,769,000.

The heavy investment in expansion is necessary to AT&T, Mr. Kappel emphasized, in order that more customers can be served and to take care of the increasing volume of business. Outdated

equipment must also be replaced and new forms of service must be introduced.

The company intends to lead the field in space communications and work is now in progress on a satellite world communications system. He noted that both the Tiros satellite and the Titan intercontinental ballistic missile use guidance systems developed by Bell Laboratories.

In closing his remarks he again called for the repeal of the telephone tax and noted that New York state will impose its own tax if the federal tax is permitted to expire. (For details regarding the New York tax note the article in this section, page 686.)

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Legality of Wire Taps Unresolved

RECENT actions in the state of New York have pointed out the conflict existing between state and federal laws relating to wire tap evidence. The controversy in that state centers around evidence which was gathered from such devices and which might be used in two criminal proceedings.

New York state has authorized the use of wire tap devices under the direction of a state supreme court justice and evi-

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TELEPHONE AND TELEGRAPH

dence gathered in this matter is admissible under the New York statute. In 1957, however, the U. S. Supreme Court, in a decision by Chief Justice Warren, held that the Federal Communications Act makes evidence obtained by this method inadmissible in federal courts. At that time the Chief Justice declared that the New York law on this matter was in violation of the federal act and it was intimated that if a case involving this matter were presented to the high court a conviction obtained from wire tap evidence would be thrown out.

More recently the U.S. circuit court of appeals ruled, in a 4-to-1 opinion, that such evidence is admissible in state court proceedings, and the court observed: "A federal court should not intervene in criminal prosecutions by a state for violation of its criminal laws." There seems little doubt that this ruling will speed up prosecution of a number of criminal cases in New York state. However, it is likely that the question may again go before the U. S. Supreme Court in an effort to resolve the conflict between the state and the federal criminal practices, and in the light of Chief Justice Warren's virtual invitation that a new test be made of the issue.

DISTRICT attorneys in New York have been urging Congress to amend the Federal Communications Act to permit such activity when a state legislature enacts laws similar to New York's. Representative Celler (Democrat, New York) and Senator Keating (Republican, New York) have announced that they will jointly sponsor legislation which will make it clear that federal law does not bar wire tapping when it is authorized by state statutes. In a joint statement the two legislators stated that court decisions which interpreted the Federal Com-

munications Act to prohibit wire tapping by state authorities, even when under court orders, have resulted in "suppression of vital evidence in a number of important criminal cases."

At the root of the confusion on the wire tap question is the Federal Communications Act which states " . . . no person not being authorized by the sender shall intercept any communication and divulge or publish the existence, contents, substance, purport, effect, or meaning of such intercepted communication to any person." By and large, federal courts have held that this prohibition also applies to private detectives and any other persons who would have cause to cut in on telephone conversations without advising the parties on the line. A number of state law enforcement officials argue that there is no violation of the law unless the conversation is both intercepted and divulged. This, they contend, gives law enforcement officers the right to use wire taps to obtain leads and tips which might produce admissible evidence.

Much of the opposition to wire taps in any form comes from the essential invasion of privacy which it involves. Many fear that legalization of wire tapping and the admission of such evidence might leave the door open to all sorts of shady dealings such as blackmail, character assassination, and the obtaining of divorce evidence. Eavesdropping in any form is repugnant to most Americans.

On the other side of the coin, however, is the frank statement by law enforcement officials that evidence obtained by this method is vital in the prosecution of such crimes as kidnaping, illegal drug sales, espionage, etc. The wire tap advocates maintain that with proper supervision there is no danger to law-abiding citizens' privacy and that apprehension of

criminals would be made a great deal easier. In support of this position it is noted that in New York city there are about 3,775,000 telephones and only about 290 court-approved wire taps are made a year in that area. This, law enforcement agents feel, could hardly be called "wild and indiscriminate use of telephonic interception."

The New York case has implications of specific interest for those states which have enacted legislation similar to the New York statute. One of three things seems certain to happen: (1) The case will again go before the U.S. Supreme Court-and from all evidence available at this time the court would probably reaffirm its position that under existing law a wire tap, without the parties knowledge is illegal. (2) Congress may amend the Federal Communications Act to permit interception of telephone calls under court supervision, (3) New York and other states with such laws may have to back down from their position should the high court rule against them and should Congress fail to amend the act.

Western Union Adopts "Local Time"

With the beginning of Daylight Saving Time on April 24th, Western Union telegrams will go on "local time." In addition to changing over 50,000 clocks to Daylight Saving Time, Western Union has introduced a further aid to eliminate the annual time-change confusion. From now on telegrams will be stamped with the local time, whether it is Daylight or Standard.

New telegraph blanks will be used bearing the words "local time" instead of "standard time" and all telegrams will

continue to carry the time filed and the time received. Time zones will be designated in the following manner: "E" Eastern, "C" Central, "M" Mountain, and "P" Pacific. "ST" or "DT" will indicate Standard or Daylight time.

Thousands of Western Union employees and the company's time service subscribers would move the minute hands ahead one hour on the clocks provided by Western Union. More than 50,000 such clocks are located in radio and TV stations, police stations, transportation terminals, business offices, etc. Each day, just before noon, Western Union telegraphically corrects its 2,200 master clocks in accordance with the official Naval Observatory clock in Washington, D. C.

New York Phone Tax Becomes Law

New York has enacted the controversial law which would permit New York city and all counties outside it to impose a 10 per cent tax on telephone calls, providing Congress permits the federal excise tax to expire on July 1, 1960. Advocates of the tax stress that it would bring in about \$40 million in revenues in New York city and some \$30 million from the rest of the state. Such additional funds would be used for educational purposes.

Should Congress permit the federal tax to lapse (which most Washington observers doubt) the New York city council and the Board of Education would have to muster a majority vote in order to impose the state levy. Elsewhere in the state, school authorities could impose the tax without further authorization if school boards representing a majority of public school pupils voted to do so.

Financial News and Comment

By OWEN ELY



California Commission Orders "Flow Through" for Rate Fixing

THE public utilities commission of California initiated an investigation into accelerated depreciation some time ago, and held forty-five days of public hearings, accumulating a record of 6,031 pages and 74 exhibits. A 3-to-2 decision has now been reached and an order issued as follows:

For the purposes of rate fixing, the commission will not allow a public utility to charge to its operating expense for income taxes any amount in excess of the amount of income taxes lawfully assessed by the taxing authority and paid by said public utility.

The majority of the commission conceded that there is some logical basis for normalization of deferred taxes purely from the standpoint of accounting theory, but "it is elementary that rate fixing is a practical and pragmatic procedure which demands the employment of judgment and opinion and which is surrounded with considerations that do not lend themselves to abstract theory or barren logic. These considerations must be given effect to reach the reasonable result which the law compels. Here, theory must give way to the facts of experience."

THE commission held that "the record is clear" that public utilities during the foreseeable future will continue to construct sufficient new plant to more than offset retirements, making normalization unnecessary. "Should this commission adopt the so-called normalization theory, we would be required to close our eyes to the obvious facts of the future which can reasonably be expected to result from California's tremendous economic growth."

The commission interpreted the U. S. Supreme Court decision in the Galveston Electric Company case in 1922 (258 US

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388, PUR1922D 159) to mean that only income taxes actually paid out should be charged to operating expenses. In the commission's opinion, therefore, it would be a negation of this ruling if utility consumers should be required to bear the burden of larger income taxes than those actually paid.

The commission also cited the decisions in Pennsylvania, Maine, and New Jersey favoring flow through. The Illinois supreme court recently allowed normalization but required the tax reserve to be deducted from the rate base.

Regarding the question as to whether California utilities could be forced to retain liberalized depreciation, the commission stated:

In this decision we do not reach the matter of the claimed duty of a public utility to avail itself of liberalized depreciation for the purpose of diminishing its income tax liability and thus lessening the burden upon its ratepayers. Surely, a reasonable argument in support of that contention could be made. As a general proposition, it is a matter to be determined in the first instance by the management of a public utility as to whether or not liberalized depreciation will be availed of or whether straight-line depreciation will be used.

Commissioner Dooley dissented, holding that the commission should consider not merely the immediate effects of flow through on current rates, but also the longer-range problems of financing and cost of expansion. Normalization would not result in any increase in rates over existing rates, he pointed out. Revenues would remain the same as if depreciation for tax purposes were computed

on a straight-line basis. In this connection he stated:

It should be noted that a number of the utilities have stated that they will use straight-line depreciation for tax purposes in the event the commission should decline to approve normalization. In my opinion, it is adverse to the public interest to cause the utilities to refrain from using the liberalized depreciation provisions of the Internal Revenue Code.

Internal funds generated from the use of liberalized depreciation reduce financial requirements for construction and thus lower the cost of new money and the resultant rate of return, which is advantageous for consumers and the general public, he added. In future ratemaking proceedings, if normalization were used, the commission could allow a return on that part of the capital structure represented by the deferred tax reserve of only the difference between the average interest rate on long-term debt and the overall return otherwise considered normal: i.e., the utility would be required to pay interest on the deferred tax reserve.

Commissioner Fox also dissented. He indicated that commission's staff had been "split asunder" on the issues involved. He held that, in citing the old Supreme Court decisions, the "majority opinion reads into these decisions a limitation on the amount of federal taxes that can be allowed in computing rates." Actually, however, the Supreme Court had not acted on the present issue. The other cases cited were those involving court decisions in other states, with no jurisdiction over the California commission. He also held that the action of the majority, in denying California utilities the right to

		OFFERING OF SECURITIES BY PUBLIC UTILITY COMPANIES (000 omitted)	8)	(000 omitted)		MPANIES				
		January 1	to March 31, 1960	1, 1960			Jenuary	Jenuary 1 to March	31, 1959	
	Total	Electric Companies	Gas Companies	Telephone	Other Companies	Total	Electric	Garganies	Telephone Companies	Other Companies
Long-Term Debt Offered Publicly Offered through Subscription Offered Privately	\$484,500	\$312,000	\$ 32,500	\$140,000	\$4.800	\$423,480 67,610 92,685	\$263,000 59,610 37,150	\$110,480	\$50,000	\$ 8,000
Total	\$672,150	\$312,000	\$208,500	\$146,850	\$4,800	\$583,775	\$359,760	\$144,630	\$56,200	\$23,135
Preferred Stock Offered Publicly Offered through Subscription Offered Privately	\$ 30,300	\$ 71,695	\$ 30,300	\$ 7.500	1 1 1	\$ 77,250	\$ 15,600	\$ 33,650	\$28,000	5 3,500
Total	\$125,495	\$ 71,695	\$ 46,300	\$ 7,500		\$ 86,050	\$ 16,400	\$ 37,150	\$29,000	\$ 3,500
Common Stock Offered Publicly Offered through Subscription	\$134,499	\$ 15,880	\$ 55,900	\$ 62,719	\$2,555	\$104,877	\$ 99,240	\$ 1,200	\$ 3,605	\$ 332
Total	\$162,254	\$ 22,588	\$ 55,900	\$ 81,211	\$2,555	\$201,086	\$158,081	\$ 31,732	\$10,441	\$ 832
Total Financing	\$959,899	\$406,283	\$310,700	\$235,561	\$7,355	\$870,911	\$534,241	\$213,512	\$95,641	\$27,517
		SEGI	SECREGATION OF FINANCING	FINANCING	- BY PURPOSE	35				
Total Refunding	\$ 3,123		\$ 3,123			\$ 28,290	\$ 3,290	\$ 25,000		
Total Divestment	•	,				\$ 832		1		\$ 832
New Money Long-Term Debt Preferred Stock Common Stock	\$669,027 125,495 162,254	\$312,000 71,695 22,588	\$205,377 46,300 55,900	\$146,850 7,500 81,211	\$4,800	\$555,485 86,050 200,254	\$356,470 16,400 158,081	\$119,630 37,150 31,732	\$56,200 29,000 10,441	\$23,185
Total New Money	\$956,776	\$406,283	\$307.577	\$235,561	\$7,355	\$841,789	\$530,951	\$188,512	\$95,641	\$26,685
Total Financing	\$959,899	\$406,283	\$310,700	\$235,561	\$7,355	116,078\$	\$534,241	\$213,512	\$95,641	\$27,517
		S	EGREGATION	SECREGATION OF FINANCING	3 - BY TYPE	w				
Competitive Bidding	\$435,900	\$281,400	\$ 32,500	\$122,000		\$395,788	\$310,788	\$ 35,000	\$50,000	
Negotiated Sales	\$213,399	\$ 46,480	\$ 86,200	\$ 80,719		\$209,819	\$ 67,052	\$110,330	\$31,605	\$ 332
Subscription Competitive Bidding Negotiated Sales No Underwriting	\$ 7,748	\$ 5,043 1,665		\$ 150	\$2,555	\$ 39,459	\$ 11,495	\$ 27,964 2,283	\$ 6,325	\$ 3,000
Total Subscription	\$ 27,905	\$ 6,708		\$ 18,642	\$2,555	\$163,819	\$118,451	\$ 30,532	\$ 6,335	\$ 3,000
Private Sales	\$282,695	\$ 71,695	\$192,000	\$ 14,200	\$4,800	\$101,485	\$ 37,950	\$ 37,650	\$ 7,200	\$15,035
Total Financing	\$959.899	\$406.283	\$310.700	\$235,561	\$7.355	\$870.011	\$534.241	4212 512	\$05.641	\$27.57°

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Ecasco Services Incorporated, Business Management & Financial Department, April 12, 1960.

take advantage of the federal statute, would thwart the will of Congress.

The commissioner also stated that utilities appearing in these proceedings were willing to credit to income (or income taxes) an amount equal to the interest on the money in the deferred tax contingency fund, which would benefit consumers.

The majority's reference to continued growth ignored several factors—the possibility of depressions, the fact that natural gas is a diminishing resource, and the possibility that Congress might rescind §167 of the 1954 code. During the 1930's, he mentioned, utility plant account declined for several years.

He also pointed out that where flow through is used no reserve is set up in the balance sheet, and in effect the utilities are borrowing depreciation credit from future ratepayers for the benefit of present ratepayers. Also, the commission in the past has used normalization in rate-making procedure, in computing revenues and estimating many expense items; it is thus an accepted principle followed for many years.

IF the five largest California utilities, Pacific Lighting and San Diego Gas & Electric do not now use accelerated depreciation. Pacific Lighting's subsidiaries do not intend to use the method because of the risk of possible future repeal of the tax concession and the possibility that when this might occur the time might not be propitious to obtain needed rate increases, either for regulatory or competitive reasons. California Electric Power has already adopted flow through. The other two companies, Pacific Gas and Electric and Southern California Edison, advise us that they have made no decision yet whether to continue the use of accelerated depreciation. (Under the Treasury rules such a decision need not be made until later in the year.) Southern California Edison has petitioned the commission for a rehearing.

First-quarter Utility Financing Exceeded 1959

Total utility financing in the first quarter of this year exceeded last year by 10 per cent, the comparison by types of utilities being as follows:

	Millions					
	First Quarter 1960	First Quarter 1959				
Electric Companies Gas Companies Telephone Companies	\$406 311 236	\$534 214 96				
Miscellaneous	\$960	\$871				

Total bond financing (new money) exceeded last year by about 15 per cent and preferred stock offerings were 45 per cent larger, while common stock flotations were 19 per cent lower. These results may have reflected the improvement in bond market conditions, and stock market uncertainties (although utility stocks behaved well compared with industrials).

A point of interest was the considerable increase in private sales of bonds and preferred stocks totaling \$283 million compared with \$101 million last year. The amount of negotiated sales was slightly larger, except on subscription offerings where the amount was much smaller.

THERE appear to be some discrepancies between the Ebasco figures and those reported by the Securities and Exchange Commission in its quarterly report on "Corporate Securities Offered for Cash." The SEC totals for all utility offerings are \$801 million for the first quarter of 1960 compared with \$936 million a year

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ago. Possibly a different basis is used for dating the rights offerings, which would throw some issues into a different quarter.

The SEC tabulation shows total corporate financing in the first quarter of this year at \$2,255 million, made up as follows:

Utility	\$801 753 361 183	Per Cen. Of Tota 36% 33 16 8 4 3
	\$2,255	100%

Balance Sheet Confusion over Disposition of Deferred Taxes

REGARDLESS of the merits of the different methods of allocating the tax benefits resulting from the use of liberalized depreciation, there can be no doubt that the differences of opinion among the utilities and the various state and federal commissions have resulted in considerable confusion regarding the accounting treatment of deferred taxes on the liability side of the balance sheet. There seem to be at least seven spots where the item may be found, as follows:

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gs of 1. If flow through is used, the tax saving is buried in earned surplus, although the amount is usually disclosed in a footnote

2. With normalization, the amount may be included in a special earned surplus account, usually earmarked as restricted for dividend purposes.

3. It may be placed in a special reserve, next to the depreciation reserve.

4. It may be placed in the depreciation reserve itself.

It may be included in accrued income taxes in some cases.

6. Under the recent SEC "Statement of Administrative Policy" it may appear in a spot between capitalization and current liabilities, under the title "Accumulated Income Tax Reductions Attributable to Necessity Certificates and Accelerated Depreciation."

7. Under an FPC order "Accumulated Deferred Taxes on Income" may appear as the last item on the liability side, as in the annual report of Southwestern Public Service.

While the treatment of deferred taxes changes almost from day to day, an analysis of such treatment in 1959 based on a study of some 80 electric utilities representing about 80 per cent of the industry, may be of interest. (See table below.)

Several holding companies were omitted whose subsidiaries follow different methods.

(Mill.)

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	No. of Companies	Revs. of Companies	Based on Revenues
Accelerated Depreciation Not Used	16	\$1,562	20%
Flow Through Used for Tax Savings	21	2.147	27
*Deferred Taxes in Special Surplus	5	841	11
*Deferred Taxes in Special Reserve	27	1,762	22
*Deferred Taxes in Depreciation Reserve	4	391	5
*Deferred Taxes in Accrued Taxes	2	298	4
*Deferred Taxes in SEC or FPC Accounts	5	898	11
Totals	80	\$7,899	100%

^{*}With normalization,

Per Cent

CALENDAR OF PROPOSED UTILITY OFFERINGS

		May off to June 30th		
Date Bidding Or Sale	Approx. Amount (Millions)	Bonds and Debentures	Method Of Offering	Moody Rating*
5/9	12	Pennsylvania Electric	C	Aa
5/10	20	Wisconsin Telephone	Č	Aaa
5/12	12	California Electric Power	č	A
5/17	22	Milwaukee Gas Light	č	Baa
5/24	10	Jersey Central Power & Light	č	A
5/24	25	Texas Eastern Transmission	ZOOOOZ	A
5/-	8	Savannah Electric & Power	C	A
6/1	30	Michigan-Wisconsin Pipeline	000000000	Aa
6/2	40	Southern Electric Generating	č	
6/7	12	Washington Cas Light	~	A
6/7	45	Washington Gas Light	6	A
		Northwestern Bell Telephone	C	Aaa
6/14	50	Consolidated Edison	C	Aa
6/27	17	Gulf States Utilities	C	Aa
6/—	3	Sierra Pacific Power	C	Baa
6/28	25	Tampa Electric	C	Aa
	20	Baltimore Gas & Electric	C	Aaa
_	22	Wisconsin Electric Power	_	_
5/31	24	Florida Power & Light	_	_

^{*}Preliminary, or rating of similar issues. C-Competitive. N-Negotiated.

Private versus Public Utilities— Ratios and Results

THE 1958 totals are available for both privately owned and publicly owned electric utilities, as compiled by the Federal Power Commission, and it may be of interest to compare some of the ratios. (See table below.)

New Hopes for Fusion?

While it has been generally assumed that commercial development of the fusion process (the principle of the hydrogen bomb) is about twenty-five years away, scientists continue to come up with interesting new ideas or gadgets, some one of which may prove successful in re-

Net Electric Utility Plant (Billions)	205 Privately Owned \$31.9 44.9 \$4.26 53% 19%	2/1 Publicly Owned* \$2.9 4.4 \$5.33 51% 22%
Analysis of Revenue Dollar (Electric Oper.) Operating Expenses Depreciation Taxes Net Operating Revenues (Electric) Total	46% 10 23 21 100%	58% 13 3 26 100%
Per Cent Earned on Average Net Electric Investment . Average Revenue Per Kwh	5.7% 2.66¢ 3,101 \$83 1.51¢ 4.38 mills	6.4% 1.62¢ 4,627 \$75 1.22¢ 4.83 mills

^{*}Excludes co-ops and federal projects.

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ducing the time interval. Fusion has such obvious advantages over fission (the principle used by all the atomic reactors now being built) that its successful development might make the atomic plants somewhat obsolete.

In the first place, there is an almost unlimited source of fuel in the oceans. Secondly, the fuel (deuterium, the so-called heavy hydrogen) can probably be processed more easily than uranium 235 can be obtained from natural uranium. Third, poisonous by-products and radiation will be avoided or substantially reduced, it appears likely.

THE latest gadget, fittingly named Alice ("Adiabatic Low-energy Injection Capture Experiment"), was described by a group of five research men from Lawrence Radiation Laboratory at the University of California, before a recent meeting of the American Physical Society.

The work was done under the general supervision of the AEC. As reported by The New York Times, the method used is to "shoot" neutral hydrogen atoms into a magnetic bottle. Some of these atoms collide with other particles and split into electrons and protons, which become charged and trapped in spiraling orbits. As more and more atoms are shot in, the split particles should eventually form a tight wad at extremely high temperatures—possibly as much as 400 million degrees, it is said.

However, as with most advance reports of this kind, the process is still largely theoretical. Preliminary experiments with a smaller device called "Little Alice" were reported encouraging by the scientists. It is said that Alice herself will cost only about \$200,000 or one-tenth the amount needed for some other methods, and it is hoped that it can be in operation by January 1st.

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FINANCIAL DATA ON ELECTRIC UTILITY STOCKS

Appr Rev (Mil			4/20/60 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earns.	% In Sh. Recent	Earn. 5-yr.	Price Earn Ratio	Pay-	Approx. Common Stock Equity
\$324	S	American Elec. Power	50	\$1.80	3.6%	\$2.44F	5%	6%	20.5	74%	38%
63	0	Arizona Pub, Serv	40	1.20	3.0	*1.92De	2	6	*20.8	63	31
13	O	Arkansas Mo. Power		1.00m	5.0	1.37De	_	3	14.6	73	33
38	S	Atlantic City Elec	31	1.10	3.5	*1.45F	10	8	*21.4	74	31
169	S	Baltimore Gas & Elec	27	1.00	3.7	1.41De	18	8	19.1	71	42
7	0	Bangor Hydro-Elec		2.00	4.9	3.10De	23	5	13.2	65	33
7	0	Black Hills P. & L	31	1.48	4.8	2.57Ja	1	4	12.1	58	38
116	S	Boston Edison	61	3.00	4.6	3.69De	4	4	16.5	81	45
31	A	Calif. Elec. Power	19	.84	4.4	*1.15De	1	10	*16.5	73	32
24	0	Calif. Oreg. Power	35	1.60	4.6	1.81De	D9	_	19.3	88	33
10	0	Calif. Pac. Util	19	.90	4.7	1.30De	22	4	14.6	70	33
76	S	Carolina P. & L	40	1.32	3.3	2.23F	11	6	18.0	59	37
34	S	Cent. Hudson G. & E	21	.80	3.8	*1.41De	5	8	*14.9	57	35
26	O	Cent. Ill. E. & G	35	1.44	4.1	2.22F	3	13	15.8	65	42
43	S	Cent. Ill. Light	35	1.52	4.3	2.45Ja	20	10	14.3	62	29
60	S	Cent. III. P. S	50	1.92	3.8	2.71Ja	5	7	19.2	71	35
20	0	Cent. Louisiana Elec,	46	1.80	3.9	2.25De	2	8	20.4	80	34
42	0	Cent. Maine Power	25	1.40	5.6	*1.90Ma	20	_	*13.2	74	32
160	S	Cent. & South West	34	.96	2.6	1.36De	7	6	25.0	70	37
12	0	Cent. Vermont P. S	19	1.08	5.7	*1.37Ma	D1	2	*13.9	79	33
				(593					MAY 1	2, 1960

Approx. Rev. (Mill.)	(Continued)	4/20/60 Price About	Divi- dend Rate	Approx.	Recent Share Earns.	% I In Sh. Recent	5-W.	Price- Earn. Ratio	Div. Pay- out	Approx. Common Stock Equity
140 S	Cincinnati G. & E	. 33	1.50	4.5	1.97De	6	3	15.7	76	36
8 O 130 S	Clave Floo Illum	12	.56 1.80	4.7 3.4	.69Se 2.95De	6 13	6	17.4 18.0	81 61	48 46
7 0	Cleve, Elec. Illum. ColoCent. Power Columbus & S. O. E.	24	.75	3.1	1.08De	8	6	22.2	69	44
52 S	Columbus & S. O. E	43	1.60	3.7	2.51F	23	5	17.1	64	31
454 S 16 A	Commonwealth Edison Community Pub. Serv		2.00h 1.00	5.8h 3.8	3.69F 1.49De	7 13	5	15.7 17.4	55 67	42 43
85 O	Conn. Lt. & Pr.	23	1.10	4.8	*1.44Ma	1	5	*16.0	76	36
615 S	Consol, Edison	65	3.00	4.6	*3.92De	5	6	*16.6	76	36
258 S 90 S	Consumers Power Dayton P. & L	55 50	2.60	4.7 4.8	3.60F 3.22De	12	4	15.3 15.5	72 74	39 36
53 S	Delaware P. & L	73	2.28	3.1	3.24Ma	7	9	22.5	70	31
	Detroit Edison	42	2.00 1.40i	4.8 3.0	2.44Ma 2.16De	10	3	17.2 21.8	82 65	46 42
156 A 101 S	Duke Power		1.10	4.8	*1.44De	3	8 5	*16.0	76	34
36 O	East. Util, Assoc	40	2.20	5.5	3.02De	10	6	13.2	73	33
3 O 17 O	Edison Sault Elec	18 40	.90 1.16	5.0 2.9	1.43Se 1.73F	27	8	12.6 23.1	63 67	34 36
	El Paso Elec Empire Dist. Elec	27	1.36	5.0	1.82De	14	7	14.8	75	32
13 S 62 S 155 S	Florida Power Corp	33	.80	2.4	1.14De	D5	9	29.0	70	41
155 S 4 O	Florida P. & L	59 18	.96 .72	1.6 4.0	2.01Ma 1.27De	13 8	17	29.4 14.2	48 56	42 28
231 S	General Pub. Util,	23	1.12	4.9	*1.65De	7	6	*13.9	68	39
	Green Mt. Power	18 35	1.10 1.00	6.1 2.9	1.28F 1.38F	D11 5	3 8	14.1 25.4	86 74	38 33
78 S 54 A	Gulf States Util	63	3.00	4.8	*3.65De	2	2 7	*17.3	82	40
27 O	Hawaiian Elec	55	2.50	4.5	3.28De	8		16.8	76	34
105 S 34 S	Houston L. & P Idaho Power	79 49	1.60 1.70	2.0 3.5	3.07Ma 2.32De	D10	6	25.7 21.1	52 73	41 33
104 S	Illinois Power	50	2.00	4.0	2.73F	23	14	18.3	73	36
54 S	Indianapolis P. & L	44 19	1.70	3.9	2.46De	12	8	17.9	69	37
33 S 42 S 51 S 47 S	Interstate Power Iowa Elec. L. & P	38	.90 1.80	4.7 4.7	1.17De 2.44F	7 11	4	16.2 15.6	77 74	28 40
51 S	Iowa-Ill, G. & E	38	1.90c	5.0	2.58De	10	4	14.7	74	40
	Iowa P. & L.	36 18	1.60	4.4 4.4	2.06De	D1	3 5	17.5 15.1	78 67	31 32
40 O 17 O	Iowa Pub. Service Iowa Southern Util	30	.80 1.48	4.9	1.19F 2.14F	3	9	14.0	69	40
64 S	Kansas City P. & L	50	2.20	4.4	3.09F	1	6	16.2	71	35
36 S 54 S	Kansas G. & E	46 37	1.64 1.42	3.6 3.8	2.55F 2.40De	D1 14	7	18.0 15.4	64 59	38 36
47 O	Kansas P. & L Kentucky Util	38	1.60	4.2	2.73De	15	6	13.9	59	40
8 O	Lake Superior D. P	25	1.28	5.1	1.70De	8	4	14.7	75	40
136 S 66 S	Louisville G. & E	35 42	1.40 1.40	4.0 3.3	*2.04De 2.47De	6 11	11 8	*17.2 17.0	69 57	36 46
12 0	Madison G. & E.	51	1.80	3.5	3.62De	6	3	14.1	50	52
5 A	Maine Pub. Ser	21	1.20	5.7	1.46F	D8	2	14.4	82	43
8 0	Michigan G. & E	76 26	1.70j 1.00	5.4	5.43De	20 7	12	14.0 18.6	31 71	41 35
198 S 31 S	Middle South Util, Minn, P. & L	34	1.60	3.8 4.7	1.40Ma 2.22F	D3	5	15.3	72	32
16 S	Missouri P. S	20	.72f	3.6	1.03Ja	13	3	19.4	70	25
8 0	Missouri Util	27	1.36	5.0	1.67De	1	-	16.2	81	35
46 S 172 S	Montana Power New England Electric	27 20	.80 1.08	3.0 5.4	*1.36De 1.31De	3	10	*20.0 15.3	59 82	40 36
52 O	New England G. & E	22	1.16	5.3	1.71F	3	7	12.9	68	41
105 S	N. Y. State E. & G	25	1.20	4.8	*1.77Ma	D9	8	*14.7	68	40
285 S 104 O	Niagara Mohawk Power Northern Indiana P. S	35 56	1.80 2.20	5.1 3.9	*2.07De 3.13De	D2 13	5	*16.9 17.9	87 70	29 36
170 S	Northern Sts. Power	25	1.10	4.4	1.41De	8	6	17.9	78	36
12 O	Northwestern P. S	21	1.10	5.2	1.66De	21	6	12.6	66	31
151 S 58 S	Ohio Edison	64	2.96	4.6 3.5	4.08Ma 1.44F	11 D2	6	15.7 22.2	73 78	38
58 S 29 O	Oklahoma G. & E Orange & Rockland Utils	32 35	1.12	3.1	*1.53De	20	6	*22.9	78	31 29
19 0	Otter Tail Power	34	1.80	5.3	2.78De	19	6	12.2	65	34
535 S	Pacific G. & E	64	2.60	4.1	3.70De	D1	6	17.3	70	34

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Approx. Rev. (Mill.)	(Continued)	4/20/60 Price About	Divi- dend Rate	Approx. Yield	Recent Share Earns.	% I In Sh. Recent	Earn. 5-yr.	Price- Earn. Ratio	Div. Pay- out	Approx. Common Stock Equity
Mill.) 58 O 138 S S O 138 264 40 S S S S S S S S S S S S S S S S S S	Pacific P. & L. Penn P. & L. Penn P. & L. Penn P. & L. Phila. Elec. Portland Gen. Elec. Pottomac Elec. Power Pub. Serv. of Colo. Pub. Serv. of Ind. Pub. Serv. of Ind. Pub. Serv. of N. Mexico Puget Sound P. & L. Rochester G. & E. St. Joseph L. & P. San Diego G. & E. Savannah E. & P. Sierra Pacific Pr. So. Carlina E. & G. Southern Colo. Pr. Southern Colo. Pr. Southern Co. So. Indiana G. & E. So. Nevada Power Southwestern E. S. Southwestern P. S. Tampa Electric Texas Utils. Toledo Edison Tucson G. E. L. & P. Union Elec. United Illum. Upper Peninsula Pr. Utah Power & Light Virginia E. & P. Wash, Water Pr. West Penn Elec. West Penn Power Western Mass. Cos. Wisc. El. Pr. (Cons.) Wisconsin P. & L.	. 36 . 27 . 50 . 28 . 29 . 57 . 38 . 45 . 30 . 25 . 33 . 45 . 30 . 25 . 38 . 39 . 18 . 39 . 17 . 29 . 37 . 29 . 37 . 29 . 37 . 38 . 39 . 39 . 30 . 30 . 30 . 30 . 30 . 30 . 30 . 30	1.60 1.25 2.24 1.30 1.32 1.90 1.80 2.10 1.00 1.44 1.80 0.150 1.12 1.12 1.60 1.40 90 1.40 1.60 1.10 72 1.92 76 1.80 1.38 1.60 1.38 1.60 1.32 1.20 1.70 3.00 1.20 1.20 1.20 1.48	4.4 4.4 4.5 4.3 4.7 5.5 4.4 5.5 4.7 5.5 4.7 5.5 4.7 5.5 4.7 5.5 4.7 5.5 5.3 4.7 5.5 5.3 4.7 5.5 5.3 4.7 5.5 5.3 4.7 5.5 5.3 4.7 5.5 5.3 4.7 5.5 5.3 5.3 5.3 5.3 5.3 5.3 5.3 5.3 5.3	*1.88De 1.75P 2.99De 1.76De *1.79De 2.61De 2.42De 2.72Ja 1.37Ma 1.44Ja** 2.11De *3.32De 2.13De 1.77F 1.26Ja 2.56F 3.87Ma 1.84F 1.16De 1.91F 2.47F 1.86Ja 1.01F 1.06F 1.00F 2.93De 1.15De *2.01Da *1.5De *2.01Ma *1.69De 1.82De 1.82F 1.44F 2.47F 2.47F 1.86Ja 1.01F 1.06F 1.00F 2.93De 1.15De 1.15De 1.15De 1.15De 1.15De 1.15De 1.12De 1.15De 1.15De 1.20F 2.34De 1.34De	D22 12 5 D2 7 D6 5 14 7 14 23 17 D13 29 11 D2 17 14 7 13 19 3 3 6 6 11 D5 36 15	Aver. 4 4 5 4 8 5 4 3 1 9 8 9 6 9 1 1 4 5 6 9 2 6 5 7 7 9 2 7 3 1 5 9 8 5 3 6 6 6	*19.1 15.4 17.2 15.9 *16.2 21.8 15.6 *13.6 *13.6 14.1 14.1 23.0 14.8 15.0 21.2 15.5 13.8 15.6 *23.6 35.0 26.3 15.2 14.3 *16.6 *17.0 19.5 23.6 *16.0 15.4 17.0 19.5 23.6 *16.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	85 71 77 68 74 73 74 77 76 68 54 77 76 68 54 77 76 68 54 77 76 68 57 77 68 68 74 77 76 68 77 76 76 76 76 76 76 76 76 76 76 76 76	29 33 38 33 37 31 34 32 34 36 38 37 39 32 33 37 34 36 46 28 37 36 40 29 41 355 30 44 39 32 31 355 40 48 38 38
46 S	Wisconsin P. S		1.30	4.8	1.90De	7	5	14.2	68	36
	Averages	•		4.2%		7%	6%	17.3	70%	
215 S 129 A 97 A 20 O 18 A 49 O 16 A 77 A	Foreign Companies Amer. & Foreign Pr. Brazilian Traction British Col. Pr. Calgary Power Gatineau Power Mexican L. & P. Quebec Power Shawinigan Water & Pr.	. 4 . 33 . 19 . 36 . 14 . 35	\$.50 1.40 .40 1.50 1.00b 1.60 .68	6.3% 4.1 2.2 4.1 7.1 4.6 2.5	\$1.19De .64De+ 2.48De .89De+ 1.98De 1.88De 2.41De 1.45De	D31% D58 27 11 D22 11 3 D10	0% -9 18 - - 9 8	6.7 6.3 13.3 20.0 18.7 7.4 14.5 18.6	42% 	57% 76 23 31 35 41 55

^{*}Deferred taxes resulting from liberalized depreciation are not normalized. If they had been normalized the price-earnings ratio would be higher. †December, 1958. **On average shares. D—Decrease, NC—Not comparable. A—American Stock Exchange. O—Over-counter or out-of-town exchange, S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December. b—Also 5 per cent stock dividend May 1, 1959. c—Also 5 per cent stock dividend June 10, 1959. f—Also stock dividend of one-half per cent quarterly. h—Also 2½ per cent stock dividend December 1, 1959, included in yield. i—Also 15 per cent stock dividend January 29, 1959. j—Also 3 per cent stock dividend (paid each year end) included in the yield. k—Also 5 per cent stock dividend February 20, 1959. m—Also 5 per cent stock dividend June 15, 1959. n—Also 10 per cent stock dividend November 11, 1959. o—Also 3 per cent stock dividend January 25, 1960.

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What Others Think

Bell Laboratories Build a Space Terminal

In a recent issue of *The Michigan Bell*, magazine of the Michigan Bell Telephone Company, an article appeared describing an experimental ground station, for sending and receiving telephone messages by way of man-made satellites, which is being built near Holmdel, New Jersey.

The base of the structure is 30 feet in diameter. It will contain a rotating superstructure for a huge horn antenna which will be used in Bell Laboratories' satellite communication experiments. (See frontispiece photos, page 18, this issue.)

The "station" now being built will include control buildings and two large antennas for communications experiments with objects in outer space. One of the uses of the installation will be to take part in communication projects sponsored by the National Aeronautics and Space Administration.

One of the projects at Holmdel will test the quality of radio signals transmitted between stations on opposite sides of the United States by means of reflections from a satellite. Although single telephone channels will be used in the experiment, the objective is to determine whether television's "broad-band signals" (the equivalent of about 900 telephone channels) could also be transmitted.

Such broad-band signals, the article said, cannot now be carried over present submarine cables and cannot be transmitted directly by radio between widely separated points, because the signals are blocked by the earth's curvature.

The satellite experiment probably will be preceded by test transmission of signals, using the moon as the reflector. The signals will be received and transmitted between NASA's Jet Propulsion Laboratory tracking station at Goldstone, California, and Bell Laboratories, some 2,300 miles apart.

This experimental telephone terminal to outer space may be the first of a network of terminals for sending phone calls and live television to distant parts of the world. Such stations would bounce radio signals off dozens of sky-mirror satellites. The first proposal for a system of satellite communications was offered in 1945 by A. C. Clarke. In 1955 Dr. John R. Pierce, director of communications research at Bell Laboratories, proposed this system of passive satellite relays. At that time there were not any artificial satellites revolving around the earth as there are now.

Heart of the Holmdel communication experiments will be the antennas and trans-

WHAT OTHERS THINK

mission techniques. A dish-shaped antenna will be used to transmit signals, and a horn-shaped antenna as the receiver. The horn-shaped antenna, which is 50 feet long, receives radio energy from essentially one direction, and less than one-millionth as much from other directions. The result is greater concentration on the wanted signal and less pickup of "noise" from other directions, especially from the ground.

ONE of the crucial problems in the experiments to be conducted will be found in tracking speeding satellites precisely. Dr. Pierce said that

The Atlas satellite has demonstrated that we can put communication equipment up. The matter of satellite communications now looks quite different from what it did five years ago, and we may expect it to look quite different five years hence. . . . it is clear that satellites can provide only a part of the communications that the world needs in any foreseeable future. . . .

Satellites will supplement all other different sorts of communications, and it is awfully important that they provide communication that is reliable and useful and attractive in comparison with other communications. Of course, this is what science gives one in the long run. The submarine telephone cable not only gives a better circuit than short-wave radio, but it is cheaper.

There may be military uses (of satellites) to provide vital communications with inaccessible polar land areas where there is no other communication to rely on.

In transoceanic communication, however, these satellites have much more promise.

DR. PIERCE is of the opinion that satellite communication has a bright future, but what it will be is conjectural. He said that if we ever turn on our television sets and view a European event beamed by radio across the Atlantic, it may come to us over a system no one has even thought of yet.

EEI Reports on Atom

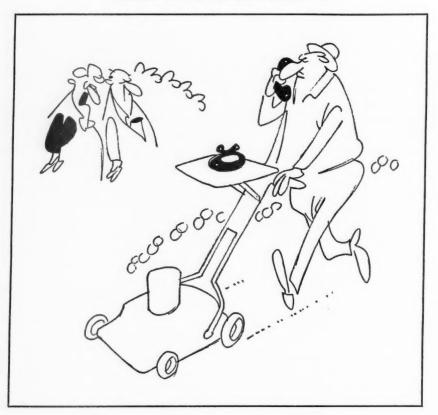
The Joint Committee on Atomic Energy on February 24th heard a report by Elmer L. Lindseth, chairman of Edison Electric Institute's committee on atomic power. Mr. Lindseth outlined the strides made by the utility companies in the field of atomic energy.

He noted that at the present time investor-owned companies have some 26 nuclear projects in progress and that these projects involve about \$650 million of expenditures and aggregate 1.8 million kilowatts

Participation by 132 electric utilities ranges from operating plants already producing power to research and study

groups. The aim is to produce economically competitive power in this country by the late sixties.

Mr. Lindseth noted that three nuclear power plants in which investor-owned electric companies are participants are in operation; 11 company-sponsored projects are under construction, design, or contract; and three are in the planning stage, of which two are in active negotiations, said Mr. Lindseth, who is also chairman of The Cleveland Electric Illuminating Company. Electric companies are also participating in nine other nuclear research, developments, and study projects.



Developments during the past year, Mr. Lindseth said, reaffirm the institute's belief that emphasis should continue to be placed on research and development with actual plant construction carried out at a rate consistent with research achievements.

He also called for intensified fuelelement technology research and engineering.

Large-scale reactors of any type generally should be installed only when there is reasonable assurance that a sponsoring utility system can produce electric power from the proposed nuclear plant substantially competitive with power generated from a similarly sized conventional unit

in the same area, Mr. Lindseth said.

He urged a continuing reduction in the federal government's rôle in commercial nuclear power. Our country's nuclear power policy objectives will be attainable at minimum cost to the taxpayer, he said, when the cost-cutting incentives and initiative of industry are utilized to their maximum.

M^{R.} LINDSETH pointed out, as he did at last year's hearing, that "healthy, ultimate utilization of atomic energy will take place with electric power companies, manufacturers of equipment, and other interested industries working together, without the special forms of assistance

WHAT OTHERS THINK

and the extent of direction by government which presently exists."

In discussing the present status of the nation's nuclear power program, Mr. Lindseth said that "progress to date in the United States program of civilian nuclear power development has been both substantial and adequate on the basis of all domestic considerations. And in the light of recent developments abroad, it also is clear that our progress is adequate to meet the requirements of friendly nations there."

The rôle of the utility industry, according to Mr. Lindseth, should be to construct, own, and operate all large-scale power reactors. "In a truly free enterprise system, as a matter of principle, there is no proper place for government ownership of commercial-type power reactors," he said.

Describing the progress during the past year on the electric company program, Mr. Lindseth pointed out that the 180,-000-kilowatt Dresden nuclear power plant attained initial criticality in October.

Consumers Power Company announced

during the past year that it will build a 50,000-kilowatt high-power density, boiling water reactor plant for 1962 operation.

I'v addition, Mr. Lindseth said that the Atomic Energy Commission signed contracts with Philadelphia Electric Company, Carolinas Virginia Nuclear Power Associates, and East Central Nuclear Group-Florida West Coast Nuclear Group. The two latter groups, plus Northern States Power Company and Pacific Gas and Electric Company, applied for construction permits during the year. Saxton Nuclear Experimental Corporation was granted a construction permit by the AEC for its 5,000-kilowatt water-type reactor early this year. In 1960, the 180,-000-kilowatt Dresden plant and the 134,-000-kilowatt Yankee plant are scheduled to go into operation. Construction of the 100,000-kilowatt Enrico Fermi plant is expected to be essentially complete by October, 1960. Insertion of fuel and lowpower testing will begin shortly thereafter. About one year of low-to-fullpower testing is scheduled.

Water Resources Development

REPRESENTATIVE Ed Edmonds on (Democrat, Oklahoma) has inserted in the appendix of the Congressional Record a speech by Major General Walter K. Wilson, Jr., Deputy Chief of Engineers for Construction, U. S. Army.

General Wilson originally delivered his speech before the Mississippi Valley Association meeting at St. Louis, Missouri, in February. In inserting the address in the *Record*, Representative Edmondson said that the General's remarks "should be of interest to state and local interests, as well as to anyone concerned with our great water needs of the future."

It was stated by General Wilson that improvements made by the Corps of Engineers have vastly improved the water resources of the Mississippi valley and have also been a contributing factor to our constantly expanding economy. In proof of this, he observed that inland water traffic had increased from 9 million ton miles in 1930 to 115 billion ton miles in 1957. These figures exclude the huge volume of Great Lakes traffic. Work done in the field of flood control has saved an estimated \$600 million per year, in addition to preventing the loss of countless lives.

A number of other benefits are also derived, including decreases in stream pollution, improvement of water supplies, creation of recreational areas, and the preservation of the nation's wild life. However, many improvements are still to be made and General Wilson stated:

The rapid growth of traffic on our 23,000 miles of improved inland waterways, coupled with a trend toward deeper drafts and larger tows, highlights the need for modernization and extension of many of these waterways. This is particularly true of the Mississippi basin system which accounts for well over one-half of the present ton mileage of inland waterway traffic.

Our increasing reliance on foreign imports to feed our expanding industries, the trend to large deep-draft bulk carriers in ocean commerce, and the changing patterns of industrial development require continuing adjustment in seacoast harbors and channels.

A NUMBER of improvements in inland navigation are now under way. These include such projects as the Calumet-Sag project to improve interconnection between Mississippi basin navigation system and the Great Lakes and the deepening of the Delaware river.

General Wilson stated that 200 reservoirs and over 8,600 miles of levees, plus almost 7,000 miles of channel improvements, have significantly reduced flood damage. With an eye to future improvements, however, he observed that despite these facilities there were some \$700 million in flood losses last year.

The problem of adequate water supplies is one that increases each year. General Wilson believes that there is sufficient rainfall to meet the growing demands provided the nation makes a sub-

stantial advance toward making the most beneficial use of all runoff. Regarding future demands for water he said:

As the nation continues to become more highly urbanized and industrialized, the assurance of an adequate water supply for domestic and industrial usage assumes ever-increasing importance. Not only are the population and industries growing, but per capita usage of water continues its upward trend, thus accelerating the problem of adequate supply. Estimates indicate that our present total demands for water will almost double by 1975.

One of the difficulties facing the nation's water resources, and those responsible for planning, is the increased cost of maintaining projects that already have been completed. General Wilson expressed hope that new procedures worked out with the Bureau of the Budget would prevent a further increase in deferred maintenance and enable the Corps of Engineers to begin reducing the existing backlog.

Numbered among the other factors which strain the water resource program were the following: (1) the trend toward higher interest rates; (2) increases in reimbursements by consumers of water and electricity.

Of particular interest were General Wilson's comments regarding the tendency to build on flood plains. He stated that basically all flood damage results from man's encroachment on natural flood plain areas. He noted that all too often, areas had been developed which were subject to flood, when other, safer sites were available and neglected. He noted that if such a trend continues, it will take larger and larger expenditures to hold losses at their present level—

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without being able to make any substantial headway toward reducing the total loss.

He stated:

We are greatly concerned over the needless drain on the national economy reflected by this problem whether through recurring flood losses or the necessity for building costly works to protect areas that might better be left undeveloped or developed in such manner as to require minimum protective measures. The states and communities affected also should recognize their vital stake in this problem, not only because of the local financial drain for flood fighting, evacuation, and rehabilitation of the affected people during times of flood and the possible deterioration in value with losses to tax rolls, but also the increased local share

in eventually providing the needed protection.

GENERAL Wilson believes that proper regulation of such flood plain development is the responsibility of state and local governments. The national awareness of the necessity for long-range planning in the field of water resources was cited by General Wilson as a "bright one."

In conclusion he reminded his audience that water resources planning is an extremely long and difficult process; quite frequently ten to fifteen years are required to conceive, receive authorization, and acquire funds for a major project. There must be continued attention to long-distance advance planning. This, he pointed out, is especially true when one considers the expanding population and the great increase in water usage.

Notes on Recent Publications

ALASKA ITS ECONOMY AND MARKET POTENTIAL (1959) U. S. Government Printing Office, Washington 25, D. C. Price 70 cents.

The recent admission of Alaska into the Union has prompted the Department of Commerce to issue a pamphlet, entitled Alaska Its Economy and Market Potential. Many of the existing books on this new state are either specialized or far outdated and the department felt a need to publish an up-to-date survey for the benefit of investors, merchants, and persons who may wish to settle in this area. The 61-page pamphlet differs from conventional market studies in the extensive background that is presented; in addition, it is well indexed for easy reference.

The first chapter of the publication is devoted to "The Land and People" and it includes population charts, climate information, history, etc. Chapter II is devoted to "Market Characteristics," including employment, cost of living, construction, transportation, banking, and finance. Of most interest to the Public Utilities Fortnightly reader will be Chapter III, which is devoted to "Natural Resources and Their Development" — this contains sections devoted to water power and natural gas. The last chapter examines "Tomorrow's Challenge" in the areas of market development, taxes, new industry, etc.

Alaska, to most of us, is an unknown area. The Department of Commerce has thoughtfully included a wall-type map for easy identification of cities and other points of interest. There are 28 charts accompanying the text, as well as several smaller maps and a number of illustrations. Alaska is bound to grow in national importance and the Commerce Department's publication would be a fine addition to any reference shelf.



The March of Events

Future of Atom Power

Nuclear power stations will be economical to build in high-cost fuel areas by 1968—or even before—in the opinion of Donald H. Stewart, assistant director for civilian reactors, reactor development division of the AEC. He also believes that such plants would be economically competitive even during the three to five years after start up, during which the equilibrium fuel cycle is being reached.

Recently completed studies, Stewart reported, show that in the future nuclear power would be competitive since savings in fuel costs would compensate for higher capital cost within a reasonable time. Right now nuclear-produced power costs about nine mills per kilowatt-hour, whereas it is only seven mills in conventional power plants. But this lower cost will be reached eventually by sound engineering improvements, Stewart predicted, based on expanding technical knowledge. He said the AEC program of experimental reactors and building of prototype nuclear

power plants would help atomic power to improve its performance.

Soviets Building More Gas Pipelines

PIPING and use of natural gas, of which there are plentiful deposits in various parts of the Soviet Union, are comparatively new developments for the Russians. Nearly 2,500 miles of pipeline were laid by the Soviets in 1959, which now gives them 5,000 miles of gas pipeline. Their seven-year (1959-65) plan calls for construction of at least 16,250 miles of pipeline of varying size to carry gas from Soviet deposits to factories and homes. (There were 635,000 miles of all-purpose pipeline in the United States in 1957.)

Up-to-date statistics on production, extraction, and use of natural gas by the Soviets are not available. But in 1958 Russia produced 30 billion cubic meters, a figure it plans to increase fivefold by 1965. By 1959 an estimated 10 million persons were using gas for fuel in their homes in some 160 Soviet cities.

California

Ultra Rapid Transit Vehicle Urged for LA

A MAGNETIC - PROPELLED, futuristic looking vehicle has been recom-

mended for solving Los Angeles' transit problem by Ideonics Corporation of Glendale, California. The design seems to be a totally new concept for transit. The new

THE MARCH OF EVENTS

rapid transit vehicle suggested uses air suspension and a type of magnetic propulsion. It is suspended a fraction of an inch above two smooth V-shaped rails by a cushion of compressed air developed within the vehicle. This would provide the ultimate in a smooth, noiseless, vibrationless ride without friction.

Propulsion is effected by use of alter-

nating current three-phase coils built into the bottom of the car truck, and driving by means of magnetic attraction and repulsion on a center rail built into the roadbed.

The vehicle will employ lightweight materials, an aircraft-type construction, and should compare favorably in cost with any modern transit system.

Illinois

Nuclear Station Starts

THE Dresden nuclear power station of the Commonwealth Edison Company started generating power around the middle of April. It kicked off by driving a 180,000-kilowatt turbine generator, electricity from which was fed into the company's interconnected transmission system.

Initial output when the plant first started was about 64,000 kilowatts. This rate is expected to be stepped up gradually over a period of several weeks.

General Electric built the plant for

Commonwealth Edison; co-sponsoring the project was Nuclear Power Group, Inc., of which Central Illinois Light Company is a member.

Dresden is the first full-scale, privately financed nuclear power plant in the world. It will cost about \$51 million, \$36 million of which is being paid for by Commonwealth Edison and \$15 million by Nuclear Power Group, Inc., as research and development expense. General Electric also contributed substantial amounts above contract price for additional research and development.

Missouri

Service Policy Reaffirmed

THE Missouri Public Service Commission has reaffirmed a long-standing policy that a regulated public utility must furnish service on request to a complainant already served by a co-operative. The agency ordered Missouri Power & Light Company to fill service requests of three residents of a rural area southeast of Boonville who had complained that service of the Co-Mo-Electric Co-operative was inadequate. Missouri Power

ignored their requests for service on the grounds they were already being supplied electricity by the co-op. The commission's order said that when electric service is available in an area from either a co-operative or a regulated utility, there is no way of preventing legitimate competition between the two, in regard to new patrons. And there is no authority, the agency said, for preventing a dissatisfied customer from quitting one and buying from the other.

New Jersey

Transit Finance Plan

The appropriations committee of the New Jersey legislature has recom-

mended that the state spend \$7 million in the next fiscal year to finance the first step in a program designed to remedy

PUBLIC UTILITIES FORTNIGHTLY

the ailing rail commuter service that 100,-000 commuters use. Of this amount, \$6 million would finance a series of service contracts to be negotiated with nine passenger carriers. This proposal for state financing of the commuter service contracts was one of several major recommendations made to Governor Meyner and the legislature by the highway department.

North Carolina

Gas Rate Hike Denied

A GAS rate increase sought by the Public Service Company of North Carolina has been turned down by the North Carolina commission. The company had asked for a 6.6 per cent rate boost which would have provided an additional \$477,282 a year. It insisted the higher rates were needed to offset an increase in wholesale gas rates. The new rates asked for were put into effect last December

with the understanding refunds would be made if the new charges were found to be excessive.

The commission held that the company's former rates were sufficient to give it a fair return even with increased wholesale costs charged by its supplier, Transcontinental Gas Pipe Line Company. It also said the rates put into effect in December were "unjust and unreasonable" and should be canceled and refunds made to patrons of the company.

Ohio

Cincinnati Suburban Rates Increased

THE Cincinnati Gas & Electric Company has had an electric rate increase of 7.8 per cent approved by the state public utilities commission for several unincorporated areas served by the company. The increase is estimated to yield about \$1,567,000 a year. The company earlier had submitted a request for a larger electric rate increase to cover service in Cincinnati proper. But negotiations are still

pending on that between city and company officials,

President of the company, Ernest S. Fields, told the city council's utilities committee at the start of negotiations on a new rate ordinance that the "continuing upward trend of costs makes an increase in rates mandatory if the company is to be financially sound and able to serve the needs of the community." He pointed out that a \$4.5 million increase would net only \$2.1 million after federal, state, and local taxes were paid.

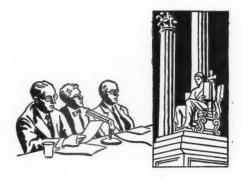
Vermont

PSC Study Approved

GOVERNOR Stafford recently approved an analysis of the organization and functions of the state public service commission to be undertaken by a professional consulting company. The study was requested by Commission Chairman Charles R. Ross, who said that experts could review statutes governing the ac-

tivities and responsibilities of the agency, analyze its organization, and make recommendations.

Ross stated that the study would cost \$2,000. He said it would be started soon by the Public Administration Service of Chicago, a nonprofit organization specializing in analyses of governmental organizations.



Progress of Regulation

Trends and Topics

Rate Factor Not Controlling in Allotment of Service Areas

RATE regulation is one of the most important aspects of public utility regulation, but sometimes it seems that small differences in rates are overemphasized. Constantly rising prices of consumers' goods are accepted as a matter of course, but strong opposition develops when a public utility company proposes a rate increase which would be insignificant when compared with other increasing costs of living. The rate question sometimes arises when two or more utilities seek authority to serve an area, but from an examination of the reported decisions it appears that other factors than rates are much more important.

Ability to Serve Is Basic Test

The Virginia supreme court has affirmed the commission's action in awarding territorial authority to Washington Gas Light Company rather than to Virginia Gas Distribution Corporation in the Washington metropolitan area, over the Virginia line. Virginia Gas insisted that the allocation of territory to Washington Gas would result in a wasteful duplication of utility facilities, smothering and throttling the economic advancement of Virginia Gas, but it also contended that retail rates charged by Washington Gas were higher than those charged by Virginia Gas.

The court upheld the commission's finding that Washington Gas, with extensive facilities for production, storage, distribution, and ample personnel, could supply adequate service. In its past operations it had shown a willingness to meet the demand, and it had been alert to consumer needs. It furnishes a type of service required for residential and small businesses. It provides an inexpensive method for extending connections to consumers' buildings from its pipeline mains. There were no facts in evidence which indicated that Virginia Gas could furnish better service than Washington Gas, and there was no evidence that there would be a wasteful duplication. It was said to be true that

PUBLIC UTILITIES FORTNIGHTLY

consumers of Virginia Gas paid a lower rate than that charged by Washington Gas. But, said the court:

"... Retail rates are, of course, a factor relating to the public interest; but it is only one of many factors to be considered, and then only in the light of the relative value of the service purchased. There must be taken into consideration the area involved; the ability of the utility to serve the area normally and under emergencies; the different types of service rendered; and the character of service required. The basic test relating to the allotment of territory for development is the ability of the applicant to render adequate service to the public under all of the circumstances there and then prevailing. The establishment of rates, tariffs, schedules, and provisions governing public utility service is peculiarly within the province of the state corporation commission." (32 PUR3d 141.)

A similar view was expressed by the Pennsylvania commission when it rejected a contention that one applicant for authority to operate a water utility should be favored rather than another because of the lower rates contemplated. The commission noted that it has supervision over the reasonableness of charges in any event (PUR1929C 436).

The New Jersey commission, in sustaining a complaint by a municipal electric utility against an electric company with regard to territorial boundaries, said that the matter of rates so far as the territory in dispute was concerned in a large measure depended on future development. The municipal plant claimed that it would be able to reduce its rates if permitted to serve a development which was progressing. The commission said that the matter of comparative rates would not be considered as determinative of the basic issue in the case. When and if interested parties in the area had reason to believe that the rate was unjust or unreasonable, they might, of course, pursue their remedies before the commission (78 PUR NS 448).

When Rate Issue Becomes Important

The New Hampshire commission, in deciding which applicant should be granted authority to operate a motor carrier service, said that in view of the fact that the operation would give daily service to thousands of patrons through the years the fares to be charged constituted a matter of extreme importance. But the commission noted that it was without direct jurisdiction over the reasonableness of charges of motor vehicle common carriers. Therefore, the level of rates which the applicants voluntarily proposed could not be ignored in this proceeding (9 PUR NS 322). Lack of jurisdiction to fix rates seems to support a decision in which rates are given substantial weight.

A federal court, upholding a Federal Power Commission grant of authority for construction and operation of natural gas facilities, said that while the commission had no jurisdiction to fix or regulate rates in local or intrastate sales, yet it was obvious that the cost to the ultimate consumer at retail was materially affected by the sales price of the gas from the wholesaler to the retailer and that a factor materially affecting this cost was entitled to considerable weight by the commission in choosing between two competing appli-

PROGRESS OF REGULATION

cants. Giving such consideration to this ultimate effect on consumers, the court continued, was not an attempt to regulate intrastate rates but was an effort to

perform the statutory duty in protecting the public interest.

The commission had made a finding that Central Illinois Public Service Company proposed to reduce its rates to ultimate consumers if it were able to obtain its natural gas supply directly from Panhandle Eastern Pipe Line Company, while Kentucky Natural Gas Corporation proposed to keep in force and effect its present rates to Central Illinois, which would be in excess of the rates to be charged by Panhandle Eastern. Kentucky Natural challenged the authority of the commission to make such a finding and to base a ruling upon such a ground. The court said that while such a finding gave added support to the ruling of the commission, the court believed that the finding could be disregarded in this case and the ruling of the commission fully sus-

tained on the remaining established facts (68 PUR NS 76).

The Missouri commission denied authority to Ozark Utilities Company to render service and granted such authority to Electric Utilities Company of Joplin after weighing rate questions and other factors material to the decision. Ozark rates were more favorable for small consumption, but for consumptions above 15 kilowatt-hours per month the rates proposed by Electric Company were the more favorable, which encouraged the greater use of electricity. The commission also considered a request by the town to be served (referring to rates) and whether a proposed extension to new territory logically and geographically fell in the territory of one company or the other (PUR1929D)

Review of Current Cases

Trended Original Cost and Reproduction Cost Evidence Deemed Unreliable in Electric Rate Case

THE Oregon commission granted a rate increase to Portland General Electric Company calculated to increase gross revenues by \$1,924,734, based upon the 12-month period which ended on December 31, 1959. The new rates were calculated to yield a return of 6.20 per cent.

592).

The commission considered the company's financial requirements, particularly those relating to its needs and plans for the development within a comparatively short period of time of vast sources of electric energy to replace a large portion of the power now being furnished by the

Bonneville Power Administration, which power may not be available in the near future. The new rates were deemed sufficient to enable the company to continue to operate successfully, maintain its financial integrity, attract capital at reasonable rates, and compensate its investors for the risks assumed.

Restricted Earned Surplus

One of the principal issues in this proceeding was the proper treatment of restricted surplus resulting from accelerated amortization of emergency facilities. This restricted surplus account had been cre-

ated pursuant to commission order, after the company had been awarded certificates providing for accelerated amortization of such facilities for income tax purposes in lieu of normal depreciation.

The commission did not deduct this earned surplus from the rate base, saying that it would be considered in the equity portion of the capital structure in determining the company's cost of capital. The restricted earned surplus had been invested in property used and useful in rendering service. Furthermore, in a prior order the commission had directed that, in determining the rate of return to be granted to the company in any future rate proceeding, due consideration should be given to the restricted surplus as interestand dividend-free capital for use by the company.

Original Cost, Trended Original Cost, And Reproduction Cost Testimony

The company submitted, in addition to evidence of the original cost of its plant in service, testimony relating to trended original cost which it termed a variation of evidence of reproduction cost new. Another witness submitted reproduction cost testimony. The commission observed that if evidence of trended original cost or reproduction cost new is to serve as a measure of property value, it must be accurate, reliable, produce consistent results, and be generally accepted as a reference standard.

A trended original cost study based on the application of cost indexes is supposed to reflect the changes in material and labor costs represented by the dollars in various plant accounts. The accuracy and reliability of such a study is directly proportional to the proper use and development of such cost indexes.

The witness whose estimates were used did not consider the fluctuations in prices

of materials and labor which might have been included in the various accounts, or relate these indexes to the respective components of each account. He relied for the most part on the Handy-Whitman publication, and applied the index to the account as a whole.

He admitted that he did not know the proportions of the various classes of labor, materials, or other details which were employed in constructing the indexes used. Nor did he know the proportions of materials and labor in the specific plant properties which he trended. This witness indicated that the determination of the per cent condition used in arriving at his trended original cost was based on his individual judgment, but his explanation of the basis for such judgment was unsatisfactory.

The commission staff used the original cost measure of value, stating that determination of an original cost rate base is obtained from recorded facts, kept in the regular course of business. It argued that the determination of a present value rate base by either a reproduction cost method or by its companion, the so-called trended original cost method, is complicated and costly and that it is plagued by unreality, uncertainty, speculation, assumptions, and is soon obsolete.

The commission concluded that the trended original cost study and reproduction cost new evidence lacked the necessary qualifications of acceptable measuring devices or methods, and resulted in values which departed from reality. It concluded that the trended original cost and reproduction cost evidence should be rejected as speculative, unreliable, and unrealistic.

It adopted the original cost method in this case.

As a matter of fact, a company executive said that while he would present evi-

dence of the value based on trended original cost, he was not concerned with what rate-making formula was used so long as the company obtained sufficient dollars to pay operating expenses, service debt, and pay a return on common stock adequate to maintain the company's credit and attract new capital. Re Portland General Electric Co. Order No. 37112, UF-2176, March 10, 1960.

3

Water Company Rate Base Limited to Risk and Debt Capital and "True" Surplus

Edgartown Water Company, in a rate proceeding before the Massachusetts commission, won nearly \$13,000 of a proposed \$16,000 increase in gross revenues. The new rate level was calculated to produce a rate of return of 6 per cent on a rate base "equal to the net plant plus materials and supplies actually devoted to the utility business, limited, however, by the amount of risk and debt capital invested in the business."

There was no dispute about the net plant figure of \$118,500. The commission used an actual balance of materials and supplies of \$9,000 instead of an arbitrarily averaged figure proposed by the city of Edgartown. A proposal by the city as to working capital was also rejected. This proposal was not based on any actual study of the time lag in the payment of operating expenses for the company. It used average findings for other companies. Since no evidence was presented concerning the comparability of these other companies, the commission thought it would be unfair to rely on the proposal. Moreover, the calculation did not reflect the fact that the company was changing from annual billing to semiannual billing, even though this change would profoundly affect the result.

The commission noted that the company sought a rate base calculated in the normal manner, but that such a rate base, if allowed, would be in excess of the capital stock, "true" surplus, and bonds and

notes outstanding, amounting to about \$121,000. Such a rate base would permit the company to earn a return on investment not wholly supplied by the capital contributors. A portion of it was supplied by customers, apparently from advance billings. This portion, until the service has actually been supplied by the company, is no different in principle than contributions for construction or customers' deposits on which no interest is paid, the commission declared. Both of the latter items should be excluded from the rate base since customers should not be required to pay a return on property which they themselves supply.

The rate base was, accordingly, limited to \$121,000.

Expense and Other Adjustments

The practice of charging advance billings to surplus on the balance sheet was disapproved as improper accounting. Obviously, the commission pointed out, revenue is not earned until the service is performed, so that advance billings should be reflected as a deferred credit, to be debited as revenue becomes earned.

A method of averaging expenses for prior years and adding a 10 per cent figure to reflect increased prices, proposed by the city, was rejected. The periods used for averaging, along with the percentage allowance, were arbitrary figures, which the commission had no reason to believe were related to the facts.

A reserve item for uncollectible accounts, approximating the average annual requirement, was allowed, to the exclusion of a company claim for a substantially greater, and arbitrary, amount. An appreciable sum spent on unsuccessful well-testing operations was required to be amortized over a ten-year period. An expense claim to the whole amount was denied as a nonrecurring item.

An expenditure in connection with the issuance of capital stock, amortized over a five-year period, was rejected as an operating expense. It is a nonoperating expense, said the commission; it is an additional cost of hiring capital and is properly taken into consideration in determining a reasonable rate of return. Re Edgartown Water Co. DPU 13045, February 25, 1960.

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Substantial Permanancy of Temporary Certificate Recognized in Contract Construction

By obtaining a temporary certificate from the Federal Power Commission, American Louisiana Pipe Line Company sufficiently performed its obligation, under a gas purchase contract with Gulf Oil Corporation, to preclude Gulf from canceling the contract pursuant to a cancellation clause requiring the pipeline to obtain the "requisite authority" within six months, a federal district court ruled. The contract provided that the pipeline would obtain such authority as was "necessary to enable it to expand the certificated capacity of its line to accept and transport the quantities of gas to be purchased hereunder." This litigation was instituted by American Louisiana in an action for a declaratory judgment that the producer acted unlawfully in attempting to cancel.

The contract did not specify a permanent certificate as "requisite authority," and the court would not read such a meaning into it. The temporary certificate, which was obtained within the limited period, authorized construction necessary to transport the gas. The court pointed out that "while in theory the authority granted by a temporary certificate may be withdrawn by the commission, in the experience of the industry such authority in effect has constituted

permanent authority to employ the authorized facilities." The natural gas industry has undertaken projects involving many millions of dollars pursuant to authority granted by temporary certificates. In the instant case, American Louisiana constructed facilities costing \$8 million.

It appeared, furthermore, that the producer had had a hand in delaying the issuance of permanent authority to the pipeline. In applying for authority to sell gas under the contract, Gulf had demanded, as a condition to its obligation to sell, a ruling that its price was just and reasonable. Such a ruling would almost necessarily delay the producer certification, and the producer authority was necessary to support the pipeline's application. Evidence showed that Gulf thus deliberately sought to delay American Louisiana in obtaining a certificate.

Since American Louisiana had in good faith attempted to secure the approval necessary to carry out its contract, Gulf was obligated to refrain from preventing the pipeline from obtaining such approval. It is elementary, said the court, that insistence upon strict compliance with cancellation provisions of a contract carries with it the obligation upon the party asserting such right to do nothing to create

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the conditions that permit the exercise of the cancellation right.

Replying to a public interest argument of the pipeline in support of its case, the court declared that there was no overriding public interest inherent in the contract, cognizable in this action, which would prevent the producer from terminating the contract if it had a contractual right to do so. American Louisiana Pipe Line Co. v. Gulf Oil Corp. 180 F Supp 155

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Right to Protest Gas Pipeline Rate Changes Does Not Preclude Unilateral Filing

PROVISION in a natural gas service A contract reserving to the buyer the right to protest any rate changes before the Federal Power Commission does not mean that the buyer must consent to a rate change before it can be filed with the commission, a federal appeals court ruled. The court affirmed an order of the commission which denied a request by Pacific Natural Gas Company to reject for filing certain increased rates proposed by Northwest Pipeline Corporation for sales for industrial resale. Other nonindustrial rates filed by the pipeline were suspended pending determination of their reasonableness. Nearly all of Pacific Natural's requirements are for industrial gas.

Under the service contract, Pacific Natural agreed to purchase gas from Northwest Pipeline at whatever rate may be on file with the Federal Power Commission, though the buyer reserved the right to protest any changes before the commission. Under § 4(e) of the Natural Gas Act, the commission is denied authority to suspend rates for industrial gas. Nor may it require security to insure a refund in the event that filed industrial rates are finally determined to be excessive

The commission held that this case is ruled by the Supreme Court's decision in the Memphis case (26 PUR3d 314). Where the service agreement does not prescribe a fixed rate, it was pointed out,

the buyer may properly promise, as it did in the instant case, to pay for the gas at whatever rate is on file with the commission, and the seller may file such rate unilaterally. The only difference in the two cases is Pacific Natural's reservation of the right to protest rate changes before the commission.

Pricing Provision Not Vague

Pacific Natural contended that this right to protest could only be construed to mean that the buyer must consent to a proposed new rate before it can be filed. The court thought it served only to make clear that the buyer did not waive any right to protest the reasonableness of new rates before the commission. "Nor can it be said that this rejection of petitioner's proposed interpretation of the contract must involve the conclusion that the contract is void for vagueness as applied to new industrial gas rates in that the price which petitioner must pay for industrial gas rests completely in the discretion of the supplier of the vendor," said the court. A pricing provision is not void for vagueness merely because the price is governed by a rate list applicable to a number of buyers but subject to unilateral change by the seller.

Pacific Natural urged that if its interpretation of the contract was rejected, then the exemption of industrial gas from the suspension power must be unconsti-

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tutional. It argued that it would have had a right at common law to reparation if the rates charged were judicially found to be unreasonable. Assuming the common-law right, the court could not find any provision in the Natural Gas Act which takes away that right. But in any event, the legislature would not be helpless to abolish a common-law right without enacting a statutory right in its place.

The court pointed to the legislative history of the statute's differences in the treatment of industrial gas and nonindustrial gas and found a reasonable factual basis to justify the distinctions made. It appeared that Congress was convinced that industrial gas needed less regulation than nonindustrial gas. Pacific Nat. Gas Co. v. Federal Power Commission, No. 16,498, March 14, 1960.

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Refusal to Suspend Rate Filings Held Unreviewable and Primary Jurisdiction Recognized in Antitrust Issue

A U. S. district court ruled that a decision of the Interstate Commerce Commission not to suspend rate filings is not judicially reviewable.

A water carrier had petitioned the commission to suspend reduced rail rate filings for the transportation of canned goods, which were "backbone" traffic for the water carrier, on the ground that the proposed reduced rail rates were below cost of service and would compel the water carrier to reduce its rates below cost, with ultimate ruinous results.

Violation of the antitrust laws was alleged in that the railroad was attempting to monopolize the transportation of canned goods from the West coast to the East coast and to drive the plaintiff from the business. Upon denial of the petition, the water carrier applied to the district court to enjoin and set aside the administrative order.

The Interstate Commerce Act contemplates the filing of new tariffs prior to a hearing, and the grant or denial of a suspension order is merely an interlocutory step preceding hearing and decision as to the lawfulness of the proposed rates. Review in this posture, said the court, would, in effect, supersede agency functioning. Refusal to suspend a rate is by

law committed to the commission's discretion and is, therefore, not reviewable.

Primary Jurisdiction

Recognizing the doctrine of primary jurisdiction, the court held that the antitrust charges should be initially considered by the commission. Of paramount concern in this connection is the fact that the railroads are operating under § 5(a) (Interstate Commerce Act) antitrust exemption agreements. Section 5(a) supersedes the Sherman Act to the extent that the approved agreement is immunized from Sherman Act proscriptions, the court pointed out, but the exemption does not immunize all forms of conspiratorial action.

Since § 5(a) is administered by the commission, the court must seek the observations of the commission with respect to the extent and scope of the exemption.

Inasmuch as the court had no jurisdiction to review the interlocutory suspension action and the commission had primary jurisdiction as to the antitrust laws, the statutory three-judge court dismissed the complaint. It determined to dismiss, rather than to retain jurisdiction of the antitrust charges, because no pur-

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pose would be served by holding the action in abeyance while commission proceedings and subsequent judicial review

were being pursued. Luckenbach Steamship Co., Inc. v. United States et al. 179 F Supp 605.

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Commission Jurisdiction Extends to Ordinance-fixed Rates

THE Ohio supreme court refused the city of Dayton a writ of prohibition to prevent the commission from exercising jurisdiction over issues relating to ordinance-fixed gas rates. The court ruled that the commission had jurisdiction to adjudicate the issues.

After the expiration of a franchise, the city of Dayton passed an ordinance fixing rates for gas service and providing that the ordinance would become a contract upon acceptance by the Dayton Power & Light Company. The company rejected it and filed a complaint and appeal with the commission. This body took jurisdiction to alter or amend the ordinance-fixed rates and received evidence relative to a

rate increase. The city claimed that the ordinance, rejected by the company, never became effective and that, in the absence of a valid rate ordinance, the commission was without jurisdiction to establish rates or modify existing rates. It sought a writ of prohibition.

The court thought the ordinance was intended to be in force as a rate-fixing ordinance before its acceptance by the company. Such acceptance was not a condition precedent to the ordinance taking effect. A municipality may pass a rate ordinance without the necessity of a utility's acceptance, it was pointed out. Ohio ex rel. City of Dayton v. Kenealy et al. 164 NE2d 400.

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Priority in Occupying Area and Customer Preference Recognized in Territorial Dispute

A KENTUCKY appeals court affirmed a trial court judgment in favor of a municipal electric plant in a jurisdictional dispute with a rural electric co-operative. For many years the city had served a farm on the municipal outskirts. When the farm was turned into a sizable new residential subdivision, which extended like a peninsula into the co-operative's territory, the co-operative claimed the right to supply it with electricity.

It appeared that the city would have to spend about \$10,000 for an extension of high voltage lines in order to serve the subdivision, while the co-operative already had a 12,500-volt line close at hand. Although annexation of the subdivision

was a possibility, the city had taken no steps in that direction. The co-operative argued that its extended operation into sparsely settled territory makes it imperative for it to serve the more densely settled areas within its amorphous territory if rates and costs are to be held down.

The court held that the lower court's judgment was sufficiently supported by the facts that the city had been serving the disputed area while it was a farm, that the developers had requested city service, and that the city was willing and able to supply service. In arriving at a solution of the case, in the light of a statute prohibiting these utilities from competing in the same territory, the trial

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court was required to balance the conflicting factors in the interest of the community development regardless of which class of publicly owned utility happened to be the beneficiary of the decision, said the appellate court. Warren Rural Electric Co-op. Corp. v. Bowling Green Electric Plant Board et al. 331 SW2d 117.

TQ.

Refund of Revenues in Excess of Commission Prescribed Return Denied

THE Maryland commission holds that it has no authority to direct a refund of any amounts of money collected under approved schedules of rates and charges, even though such rates and charges may produce revenues in an amount above that anticipated by the regulatory body at the time of the approval of the schedule. Conversely, the commission is without authority to establish increased rates for a utility to recover any revenue deficiency that may result when previously approved rates produce less net operating income than was anticipated.

Actually, said the commission, experience has been that in most instances a utility has not, under commission fixed rates, realized the return which the commission had estimated would be produced.

Authority to Reopen

The commission also took up the question of whether or not it has authority to reopen a previous case. It appeared to the commission that there was no restriction upon its authority to reopen, review upon its own initiative, or revise any order passed by it, regardless of the length of

time such order may have been effective. This did not mean, though, that there might not be some limitation upon the extent to which such orders may be revised, as witness the lack of authority to direct a refund of excess revenues collected under approved schedules.

In cases involving general revisions, the commission went on to say, it considered it far better practice to institute new, separate, and distinct proceedings, whether such proceedings might have been begun upon the investigation of the commission, the utility, people's counsel, or other interested parties. The commission could find no practical advantage in reopening a case that had been closed for approximately two years. Re Chesapeake & P. Teleph. Co. of Maryland, Case No. 5625, Order No. 54292, February 25, 1960.

In a companion case, the commission reiterated its holding that it did not have authority to direct refunds of amounts of money collected under approved rates and charges. Re Baltimore Gas & E. Co. Case No. 5627, Order No. 54293, February 25, 1960.

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Refund of Unauthorized Rate Increase

THE Florida commission, by two recent orders, directed the Houston Corporation to refund an unauthorized increase to customers in Daytona Beach. The commission found that the company had increased its minimum charge for

manufactured gas at the city gate from 55 cents to \$1.50 and had been collecting such increase without lawful authority.

The commission subsequently denied a petition for reconsideration. The company had contended that the commission

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had approved its general rules and regulations, and that such rules and regulations had included Daytona Beach. True, answered the commission, but the general rules and regulations referred to had nothing to do with the increase of the minimum charge for manufactured gas.

The commission considered the reference completely impertinent and insufficient to support the conclusion that the commission had authorized the company to increase its rates at Daytona Beach.

The company next contended that the commission's general counsel had, through correspondence, said that the increase in minimum charge had been temporarily approved. The general counsel and commission staff member, answered the commission, had naturally assumed that the company would not increase its rates without authority and had concluded that the increase had been temporarily authorized, prior to checking the voluminous and detailed tariff filings of the company.

Regardless of that, the record affirmatively disclosed that the increase had never been authorized. The assumption by commission employees that the increase had been approved could not give validity to otherwise unlawful rates and thereby impose an unlawful burden upon the public. Re Houston Corp. Docket No. 5837-GU, Order Nos. 2855, 2855-A, January 22, 1960, February 11, 1960.

S.

Acquiescence Key Factor in Rate Ordinance Cases

THE Texas court of civil appeals thoroughly aired the question of procedural due process in municipal rate ordinance cases recently, and cut a fine line of distinction between two apparently similar situations. In one of the cases, involving Willow Bend Utilities, Inc., the city of Houston's petition for an injunction restraining the company from charging increased rates was denied. But the trial court's denial of an injunction in the other case, involving Memorial Bend Utility, was reversed.

Willow Bend Utilities

The territory served by Willow Bend, a private water utility, had been annexed by the city of Houston. Subsequently, an ordinance had been passed providing that no private utility could charge a rate greater than that in effect on a certain date.

The ordinance had been passed with no hearing or notice to Willow Bend. Al-

though Willow Bend had continued to charge the same rates it had been charging prior to annexation, which were the rates set by the ordinance, it had requested a rate hearing.

The court held that the trial court's refusal to enjoin the company from charging the increased rates was not an abuse of discretion since the effect of the company's request for the rate hearing was to express dissatisfaction with the rate fixed by the ordinance.

Where a regulatory body proposes to fix a rate to be charged by a utility for its services different from that to which the utility in some manner agrees, said the court, procedural due process requires that the utility receive notice and be granted a hearing.

The court did not deem it of significance that the company was operating without a franchise from the city. Although a city may require removal of a utility's properties if it has no franchise,

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it may not, while allowing such properties to be devoted to public use, require the utility to render services at noncompensatory rates. The same rule as to procedural due process applies to the fixing of rates for a utility allowed to operate without a franchise as applies where the utility has a franchise.

Memorial Bend Utility

There was just one difference in the factual pattern relating to the Memorial Bend Utility. The evidence showed that Memorial Bend had petitioned the city council, prior to the passage of the ordinance in dispute, to pass an ordinance approving the company's current rates and charges. The company, after the passage of the ordinance, had continued to charge the same rates it had prior to annexation, and these rates were the same as set by the ordinance. Two years later, the company requested a rate hearing, similar to the one requested by Willow Bend Utilities.

The court concluded that the ordinance, as applied to Memorial Bend, was valid and effective to fix the maximum rates. If the utility consents to an order by the regulatory body fixing particular rates, the court pointed out, no notice of the passage of the order need be given and no hearing need be accorded the utility.

The court made it clear that it was not holding that even though the company consented to the adoption of a rate, it would be estopped to assert the rate was confiscatory in a suit filed within the time prescribed by law after the passage of the ordinance adopting the rates. It merely held that procedural due process had not been denied and that the ordinance not having been contested in court for over two years after it became effective and then having been contested on the ground that the rates established were noncompensatory, precluded the company from

changing its rates except with the approval of the city council.

Confiscation Issue

The company contended that continued enforcement of the rates would confiscate its property. The court answered that the proof showed that if the revenue from tap charges was included as income for the years in question, the company would show a profit. The company's argument that the tap charges were nonrecurring so that such revenue could not be considered in determining profit was held untenable. Although nonrecurring revenue may not be considered in fixing a rate operative in the future, the court said, it was reasonable to consider such revenues in a situation like this, where the company contended it should not be enjoined from raising rates fixed by ordinance because it had been operating at a loss.

The court was not unaware that its inquiry in a temporary injunction proceeding was whether the trial court had abused its discretion. However, where the facts conclusively show a party is violating the substantive law, it becomes the duty of the court to enjoin the violation. In such case, there is no discretion to be exercised. The court applies the law to positively established fact.

Preservation of Status Quo

Also, continued the court, it is the office of a temporary injunction to preserve the status quo. The status quo to be preserved is the last actual, peaceful, noncontested status of the parties to the controversy which preceded the suit and which should be preserved until a final determination of the matters in controversy. The last actual peaceful and noncontested status of the parties to this suit was the status created by the ordinance adopting rates voluntarily used by the company which the company had requested the council to

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adopt, and the ordinance adopting them was not contested as fixing confiscatory rates until two years after it became effective.

Therefore, the trial court's denial of the injunction was reversed, and the company was enjoined from charging rates in excess of those fixed by the ordinance. City of Houston v. Willow Bend Utilities, Inc. et al. 331 SW2d 333; City of Houston v. Memorial Bend Utility Co. 331 SW2d 418.

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Hazard Recognized in Second Gas Line to Building

A LOUISIANA court of appeals sustained a lower court judgment which refused to require a gas company to run a second gas line to a single building. With one line already installed to one end of the building and serving apartments in that area, the owner of the property contended that the company was arbitrary and capricious in refusing to install a second line to the other end of the building to serve other apartments.

Overwhelming evidence showed, as the company contended, that it would be hazardous to have two lines to a single building. No other buildings in the city had more than one gas line. In the event

of fire or storm damage, it is imperative that the gas line be cut off immediately. It may well be that a second line into a building might be overlooked at such a time, with serious consequences.

Nor could the owner prevail with the argument that since there was no state statute or municipal ordinance prohibiting the requested installation, the company's refusal was arbitrary. "Seldom if ever," said the court, "have we been confronted with facts which so clearly and perfectly demonstrate that the action of the respondent is not arbitrary or capricious." Louisiana ex rel. Thalheim v. Louisiana Gas Service Co. 117 So 2d 617.

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Gas and Electric Service Justifiably Refused

THE Missouri commission held that a gas and electric company had justifiably refused to furnish service to a partially erected dwelling house. The evidence showed that the house had been built under the company's 69-kilovolt transmission line and that there was a distance or clearance between the low conductors and the ridge of the roof of the house of 17.8 feet. Supplying the house would have increased the fire hazard and would have expedited the completion and occupancy, further contributing to the hazard.

A fire at the house could destroy the

69-kilovolt transmission line, for a period of at least twenty-four hours, seriously affecting service to a municipality.

The commission was of the opinion that the company's refusal to serve, under the circumstances, did not subject the petitioners to any undue or unreasonable prejudice or disadvantage. To direct service, said the commission, would result in an unreasonable interference with the company's statutory duty to provide safe and adequate service to the general public. Barnett et al. v. Missouri Power & Light Co. Case No. 14,160, March 1, 1960.

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Telephone Service Properly Withheld from Suspected Gambler

THE New Jersey commission refused The New Jersey Bell Telephone to order New Jersey Bell Telephone Company to restore service to a former subscriber whose telephone had been disconnected at the request of the local police, where the police refused to issue a letter of "no objection." The company's general exchange tariff reserves the right to discontinue service upon objection by governmental authority. The customer in this case demanded restoration of service, pointing out that he had not been arrested or charged with any unlawful activity at the time his house was searched by the police in connection with alleged horse-betting activities.

The commission reaffirmed the reason-

ableness of the company's tariff provision, noting the serious consequences to the company if it should furnish telephone service which it knows, or reasonably should know, is used illegally. For this reason, it has long upheld the company's right to refuse to restore service, once properly ordered removed, unless a proper governmental official indicates that there is "no objection" to restoration.

Nor will the commission pass upon the propriety of the refusal of an official to issue a letter of "no objection." The proper forum in which to test such refusal is a court of law. Dinverno v. New Jersey Bell Teleph. Co. Docket No. 601-8, March 15, 1960.

Other Recent Rulings

Anticipated Franchise Taxes. The Missouri commission considered it inappropriate to include in an electric company's rates an allowance to compensate for increases in franchise taxes which might be imposed subsequent to the effective date of the order. Re Missouri Utilities Co. Case No. 14,275, January 21, 1960.

Gas Company Return. The Missouri commission approved a proposed rate increase which would allow a gas company a return of 4.91 per cent on a fair value rate base. Re Carl Junction Gas Co. Case No. 14,337, January 21, 1960.

Agency Station Discontinuance. The Missouri commission held that the fact that profits, or excess of revenues over direct expenses, may be shown in the op-

eration of an agency station, in any particular year, or consistently from year to year, will not alone compel the maintenance of an agency service, nor will the single fact that a railroad is showing a consistent loss at any one station compel its closing, since the criterion for discontinuance is whether or not public convenience and necessity require continued maintenance as an open agency station. Re Wabash R. Co. Case No. 14,318, January 27, 1960.

Radio Installation on Vessels. The U. S. court of appeals held that the Federal Communications Commission was justified in denying a water carrier's application for exemption from the statutory requirement of radio installations on vessels carrying passengers for hire where operating conditions were not such as to

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render the installation unreasonable, unnecessary, or ineffective. Delaware, L. & W. R. Co. v. Federal Communications Commission et al. 272 F2d 706.

Burden of Proof. The New Jersey commission held that an interstate railroad petitioning for an intrastate rate increase has the burden to submit sufficient evidence as to revenues and expenses and the method of allocating such items to operations within the state. Re Delaware, L. & W. R. Co. Docket No. 594-11260, February 1, 1960.

One-way Rights. The U. S. district court held that the ICC's interpretation of a motor carrier's certificate as authorizing only one-way service in a certain direction, with service to and from specified intermediate and off points on traffic in that direction, was not erroneous where the purchaser of the operating rights knew that the original certificate specified that no return trip transportation for compensation could be performed. Burlington-Chicago Cartage, Inc. v. United States et al. 178 F Supp 857.

Overpass Reconstruction. The New Jersey supreme court pointed out that the fact that in an isolated instance the driver of a 30-ton truck wished to traverse a country lane which contained a railroad overpass when other adequate roadways were available would not justify a mandate for a new bridge, since the obligation of a railroad to maintain an overpass is not an absolute burden to make and maintain a structure adequate to support the maximum load permitted at all times by the Motor Vehicle Act. Re County of Bergen, 156 A2d 694.

Use, Not Need, Reduced. The New Jersey commission denied a railroad per-

mission to discontinue passenger service on a certain division where, although there had been a forced reduction in the use of the service because of discontinuance of ferry transportation across a river, there had been no showing of any reduction in the need of the public for the service. Re Brotherhood of Railroad Trainmen, Docket Nos. 5811-10992, 593-11237, January 28, 1960.

Telephone Company Return. The Wisconsin commission considered a return of 6.56 per cent on a telephone company's net book value rate base reasonable. Re Lakeland Teleph. Co. 2-U-5262, 2-U-5263, January 28, 1960.

Telephone Company Return. The Wisconsin commission considered a return of 6.15 per cent on a telephone company's net book value rate base reasonable. Re Stockbridge & Sherwood Teleph. Co. 2-U-5284, January 29, 1960.

Interpretation of Tariff. The Louisiana commission pointed out that a freight tariff should be interpreted according to the reasonable construction of its language, and neither the intention of the framers nor the practice of the carriers is controlling. Ex Parte Texas-Louisiana Freight Bureau, Application 2127, Docket 7913, Order No. 8013, February 4, 1960.

Exemption from Rate Stablization Order. The Connecticut commission held that a motor common carrier had demonstrated that its transportation of cinder or concrete blocks, in prepackaged form, banded and palletized by the shipper, and loaded and unloaded by means of special equipment required to facilitate handling and avoid breakage, was a specialized service that should be exempted from the commission's rate stabilization order. Re

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L. Ciercielli & Son, Inc. Docket Nos. 9652, 9652-1, February 5, 1960.

Quality of Service in Rate Case. Since the commission may not consider the quality of service in fixing rates, the Florida commission pointed out, a rate hearing may not be withheld pending an improvement in service. Re Southeastern Teleph. Co. Docket No. 5429-TP, Order No. 2872, February 10, 1960.

Municipal Water Plant Rate Base. The Wisconsin commission held that a reasonable rate base for a municipal water plant consisted of the plant's net book value less contributions in aid of construction plus an amount for working capital and materials and supplies. Re Village of Iron Ridge, 2-U-5310, February 11, 1960.

Burden of Proof as to Producer Rate. If it may be reasonably inferred that a proposed natural gas producer price is higher than other prices paid by its purchaser in the production area, it is an essential part of the producer's case to present evidence to rebut the inference or to indicate what the actual effect of the proposed price would be or the effect at other price levels, the Federal Power Commission pointed out. Re Western Nat. Gas Co. et al. Docket Nos. G-16099 et al. February 15, 1960.

Intervention Denied. Wayne county, Illinois, as consumer and representative of its residents, was denied intervention by the Federal Power Commission in a rate proceeding involving Panhandle Eastern Pipe Line Company, where it appeared that Wayne was adequately represented by the Illinois commission and by a company which indirectly supplied Wayne with the pipeline's gas. Re Pan-

handle Eastern Pipe Line Co. Docket No. G-19780, February 17, 1960.

Dividends and Pay-out Ratio. In fixing a rate of return of 6.25 per cent on a telephone company's rate base (reproduction cost new less depreciation), the Ohio commission allowed 6 per cent dividends on the equity portion of the rate base at a pay-out ratio of about 75 per cent, after allowance for all operating expenses, depreciation charges, taxes, and interest. Re Northwestern Teleph. Co. No. 28,260, February 19, 1960.

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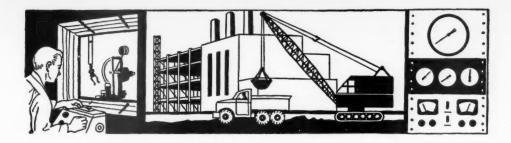
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Rate Order Conditioned. The effective date of a telephone rate order which took into account a wage increase for which the company had made no firm commitment was conditioned, by the Wisconsin commission, upon the filing of a sworn statement that the wage increase had actually been placed in effect. Re Novy's Teleph. Co. 2-U-5300, February 22, 1960.

Fair Value Evidence Rejected. In excluding evidence of "replacement cost" in a natural gas pipeline rate case, the Federal Power Commission pointed out that it is not required to consider such "fair value" methods in exercising its ratemaking function. Re Panhandle Eastern Pipe Line Co. Docket No. G-19780, February 17, 1960.

Certificate Revoked. The New York commission ruled that a general lack of adequate service under a motor freight certificate, followed by the ultimate cessation of service for reasons not shown to be beyond the carrier's control, required the revocation of the certificate and precluded its transfer to a proposed purchaser. Re Onondaga Freight Corp. Case MT-2960, March 22, 1960.



Industrial Progress

\$48,000,000 Program Planned By Long Island Lighting

LONG Island Lighting Company, Mineola, New York, spent \$46,000,000 for construction in 1959, according to Errol W. Doebler, chairman of the board. This is just slightly above the amount the company invested in 1958 for new property and equipment. It is also higher than the average of

the past ten years.

Expenditures in 1960, Mr. Doebler estimated, will be somewhat higher—about \$48,000,000. The largest single item, \$8,0000,000, is for the completion of the fourth generating unit at the Port Jefferson plant. Total cost of the generating unit will be about \$27,500,000. Mr. Doebler said that this unit will supply the company's growth in power requirements only until 1962. Looking back to 1946 this one unit of 185,000 kilowatt capability would have comfortably provided power for the entire system. Now it represents about 15 per cent of its total capability.

Expenditures for transmission and distribution facilities in 1960 will be over \$18,000,000; \$11,000,000 will be invested in LILCO's expanding gas business and \$4,500,000 in common

plant facilities.

PG&E to Double Size of Morro Bay Power Plant

PACIFIC Gas and Electric Company plans to double the size of its Morro Bay power plant in San Luis Obispo county, it was announced recently by PG&E President N. R. Sutherland.

The project will add 325,000 kilowatts of electric generating capacity to the plant, raising the total to 655,000 kw and making Morro Bay the second largest steam power station on the PG&E system, Mr. Sutherland said. Only Pittsburg power plant in Contra Costa County, largest in the west, will have more capacity.

Work on the Morro Bay project, which will cost more than \$40 million, is scheduled to begin about January 1, 1961, and be completed in the winter of 1962-1963, the PG&E president reported.

The building containing the new unit will be added to the south side of the existing plant, approximately doubling the size of the present structure. The exterior architecture of the new building will be in keeping with the aluminum panelling installed in

1955, Mr. Sutherland said.

The new unit will require construction of an additional sea water evaporator similar to those installed in the original plant completed in 1955. Of an improved design, it will have a capacity of 72,000 gallons per day, making the big generating unit's steam boilers self-sufficient for fresh water. As in the existing plant, no water from Morro Bay's domestic system will be used, Mr. Sutherland said.

A.T.&T. Plans Record \$2.6 Billion Expansion

AMERICAN Telephone & Telegraph Company will spend a record \$2.6 billion on expansion this year, Frederick R. Kappel, president, told the 75th annual meeting recently.

This is \$350 million more than the company spent in 1959 and tops the 1957 record by \$100 million. It is the largest sum budgeted for expansion by any American business firm in history.

A-C Releases New Bulletin on Atomic Energy Facilities

A NEW bulletin describing and portraying some Allis-Chalmers accomplishments in design and construction of reactors here and abroad has been released by the company.

Also included in the booklet is information on the many resources and services which the company's Atomic Energy Division can provide along with a discussion of the division's technical personnel and research and production facilities devoted to atomic energy problems.

Copies of "Atomic Energy at Allis-Chalmers," 43B9541, are available on request from Allis-Chalmers, Mil-

waukee 1, Wisconsin.

New Narrow-Range Voltage Recorder Available From G-E

A NEW narrow-range a-c voltage recorder for utilities and industrial plants demanding close, accurate voltage checks is now available from General Electric.

The instrument provides a continuous record of voltage fluctuations between 110 and 130 volts on a 1034 inch calibrated scale and strip-chart. Accuracy is plus or minus 0.25 per-

cent of mid-scale voltage.

In operation, the recorder uses the stable voltage characteristics of a silicon diode to compare forward and reverse half-cycles of the input voltage. This produces an average d-c voltage proportional to the input RMS voltage, which is then measured using a potentiometric null-balance recorder mechanism.

The recorder is available for both 50- and 60-cycle systems. Chart speeds ranging from ½ to 360 inches an hour and response times from one to 24 seconds can be provided.

Kentucky Power Awards Contracts To Westinghouse and B & W

KENTUCKY Power Company has announced the awarding of contracts to Westinghouse Electric Corporation and Babcock & Wilcox Company for major equipment to be installed at its Big Sandy Plant, soon to be built in eastern Kentucky.

(Continued on page 20)

The \$39-million plant will be located on the river of the same name near Louisa, Ky. Construction is expected to be started in June, with completion anticipated for the Fall of 1962.

The plant's 265,000-kilowatt steam turbine-generator unit will be built by Westinghouse: the turbine at its Steam Division at Lester, Pa., and the generator at its East Pittsburgh, Pa., plant. The turbine will operate at a steam pressure of 2,400 pounds per

square inch and a steam temperature of 1,050°F.

Babcock & Wilcox will build the 150-foot-high steam boiler, of the pulverized fuel-fired, reheat type. It will have a capacity of supplying 1,890,000 pounds of main steam per hour and 1,534,000 pounds of reheat steam per hour. The principal boiler components will be fabricated at B. & W.'s Barberton, Ohio, works. Kentucky Power is an operating

company subsidiary of American Electric Power Company and the new plant will be interconnected and integrated with the other 15 major power stations of the seven-state AEP System,

Stone & Webster Names William L. Sheets Senior Construction Manager

WILLIAM L. Sheets, vice president of Stone & Webster Engineering Corporation has been named senior construction manager of the worldwide engineering and construction organization, it was announced recently by Fred Argue, president.

Stone & Webster is engaged in the design and construction of power plants, hydroelectric dams, nuclear facilitites, chemical and petroleum plants and industrial installations in the U. S., and other countries of the

free world.

In his new capacity, Mr. Sheets will be responsible for the administrative direction of all construction department activities. Currently Stone & Webster projects are under construction or being planned in the U.S. from Massachusetts to Washington State and from Illinois to Louisiana. Foreign activities include projects in Britain, France, Germany, Italy, Turkey, Algeria, Canada, Brazil, Dominican Republic and Japan.

Mr. Sheets first joined Stone & Webster as an instrumentman in 1929 and successively worked as resident engineer, project engineer, and general superintendent on construction projects in various parts of the U.S. He was named construction manager in 1955 and elected a vice president in

1958.

Three Utilities Receive Awards From National Safety Council

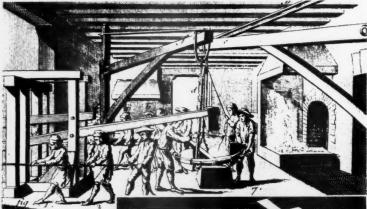
THREE public utility companies have received the National Safety Council's 1959 Public Interest Award for the exceptional service to safety of their advertising campaigns.

The Atlantic City (N. J.) Electric Co. sponsored a Christmas safety campaign on radio and through newspaper advertisements, and stressed safety in employe bulletins and an employe telephone service.

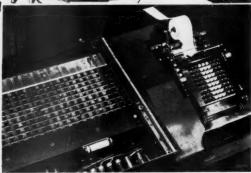
The Bell Telephone Company of Pennsylvania promoted a school safety campaign by displaying posters on company trucks, distributing leaflets and booklets, and sponsoring a school safety patrol poster contest.

Continued on page 22)

many steps vs.



An anchor is being forged here. The threeman-to-a-side crew. tugging alternately on the two ends of a rope, spin a geared flywheel which supplies power to the triphammer.



This exclusive R & S service is made possible by this machine of our invention

It is a needless and costly tug-of-war finding the time for your personnel to compile rate bill analyses, when our "One-Step" Method

can do the job faster, better and more economically.

The triphammer production speed and accuracy of "One-Step" monthly rate bill analyses offer a two-fold advantage to rate engineers: 1. always up-to-date figures on present consumption can be safely geared to future operational planning; 2. the widely recognized validity of our analyses are a definite plus in preparing and presenting rate cases.

Change-over to the "One-Step" Method is easy, and your personnel is not involved in compilation—all the work is done in our office. The full story is in our booklet, "One-Step" Method of Bill Analyses.

A note to Dept. U-4 will bring your copy

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(Continued from page 20)

The Pacific Telephone Company (Oregon area) sponsored a community safety project publicized on a morning television show.

Louisville G&E Construction To Total \$40 Million in 1960-61

THE Louisville Gas & Electric Company announced it expects to spend \$40,000,000 during 1960 and 1961 on new construction projects.

A new 156,000-kilowatt generator is the largest item, but also included are a number of other improvements and extensions in both the gas and electric systems, according to B. Hudson Milner, executive vice president.

Copes-Vulcan Division Expanding Facilities

THE Copes-Vulcan Division of Blaw-Knox Company is expanding its manufacturing facilities in Erie, Pa., into a plant formerly occupied by the Erie Resistor Company Plastics Division.

Production of some of the parts for Copes-Vulcan's line of power plant equipment, and of valves for nuclear power installations, are being transferred to the newly leased facilities at 1345 West 12th Street. Operations are expected to begin there some time after May 1, 1960.

Division offices and principal manufacturing facilities will remain on West 26th Street.

According to George L. Davis, vice president-general manager of the Division, the expansion has been necessitated by continuing growth of

Copes-Vulcan business.

ALCOA-Rome Catalog

A KEY tool for electrical utilities—
"Aluminum Electrical ConductorsGeneral Engineering Data"—has been
revised and greatly expanded, less
than two years following its initial
publication by Aluminum Company of
America's Rome Cable Division.

The publication lists immediately available sag and tension charts for covered and bare aluminum conductors, and ACSR (Aluminum Conductor, Steel Reinforced). The original publication listed nearly 4000 charts available from Alcoa—by far the most comprehensive series available in the industry. The revision lists an additional 600 charts.

Retained in the revised publication are several features of the original: it includes a complete glossary of aluminum conductors, alphabetized by

code names; and is prepared in file size, punched for desk-top use in a loose-leaf binder.

Copies of the revised publication may be secured from any Alcoa-Rome sales office, or on request to 736 Alcoa building, Pittsburgh 19, Pa.

Duquesne Light to Spend \$30,000,000 on Construction In 1960

DUQUESNE Light Company, Pittsburgh, Pa., expects to spend over \$30,000,000 for construction this year, bringing its total of such expenditures since World War II to \$390,000,000, according to Phillip A. Fleger, chairman and president.

In making the anouncement, Mr. Fleger said that preliminary studies of the next expansion of the company's generating capacity indicate that better results can be obtained by installing an additional interconnection with a neighboring company than by installing another large power station.

Westinghouse Gets 'Letter of Intent' for 360,000-KW Atomic Power Plant

CONSTRUCTION of the nation's largest atomic electric power plant may be started next year by Southern California Edison Company. Following a recent meeting of the company's board of directors, Harold Quinton, chairman, said that a letter of intent to negotiate contracts for the design and construction of a 360,000-kilowatt nuclear power plant has been sent to the Westinghouse Electric Corporation and to the Bechtel Corporation.

The contemplated plant will use the world's largest nuclear reactor. It would be designed and built by Westinghouse who also would supply the steam and electrical equipment. The over-all plant cost is estimated at approximately \$70,000,000. Bechtel Corporation would be the engineering constructors.

Based on Westinghouse and Edison studies, the plant would be economically competitive with conventional plants over its lifetime. According to present estimates, such a plant would require about four years to construct.

"The consummation of negotiations and the actual beginning of construction will depend on several factors, including finalizing of contracts, approval of the Atomic Energy Commission, and the California Public Utilities Commission and selection of

code names; and is prepared in file a specific site," Mr. Quinton said.

The closed cycle water reactor, which would be used in the plant, has been the subject of the most intensive research and development during the past decade. Edison's interest in this type results from the reactor's history which indicates a high degree of reliability, safety and control, Mr. Quinton said.

Briefly described, this type of plant has a 300-ton reactor vessel in which uranium oxide fuel elements are suspended. Water under a pressure of 2000 psi is circulated around these fuel elements, circulates through a heat exchanger, and transfers heat to a secondary system where water is converted to steam to turn the turbinegenerator.

A 360,000-kilowatt power plant will supply enough electricity to meet the residential needs of a city of more than half a million population.

G-E Appointment

FRED A. HOLLENBACH has been appointed project manager for the nuclear power plant which General Electric's Atomic Power Equipment Department (APED) will furnish the Consumers Power Company of Jackson, Mich., APED general manager George White announced recently.

APED has been selected to furnish the nuclear portion of the 50,000kilowatt power station, which will be located on the shore of Lake Michigan, between Charlevoix and Petoskey, Mich. It is scheduled for operation in 1962.

International Harvester Introduces Seven New Service-Utility Bodies

SEVEN new service-utility bodies designed specifically for International light-duty trucks have been introduced by the motor truck division of International Harvester Company.

The new bodies make International models of 4,200 to 8,800 lbs. gross vehicle weight into time-saving workshops on wheels. They are offered in four conventional and three completely-enclosed models.

Greater strength and new styling that is compatible with basic truck design are common to all seven bodies. Heavy-duty corrugated steel floors, full-length drip mouldings, completely-enclosed wheel housings and double panel, electrically welded steel compartment doors are features that

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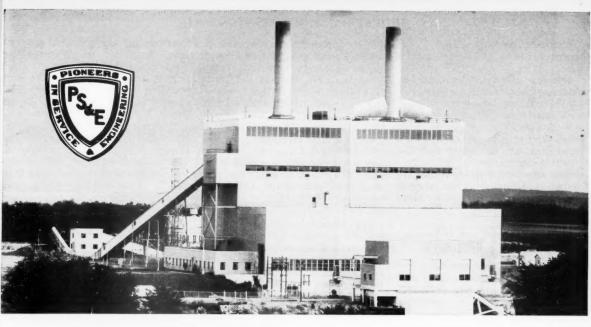
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(Continued from page 22) contribute to long, trouble-free service

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Optional equipment available includes overhead rack with adjustable ladder and material brackets, telescopic steel roof with locking endgate, side-mounted pipe carrying brackets, heavy-duty rear bumper with safetytread step and removable vise and pipe threader bracket.

The new service-utility bodies are described in detail in a new International catalog, form CR-334-K, which

is available on request.

Hidden Water Costs Is Theme Of New Leslie Bulletin

LESLIE CO., Lyndhurst, New Jersey, manufacturer of pressure, temperature and liquid level controls for steam, gas and liquids, has completed a new bulletin on liquid pressure re-

ducing valves.

The new bulletin titled "Eliminate Water Waste With Controlled Pressure" points out ways that proper valve selection and application can reduce "hidden costs" connected with the use of water in industry and focuses attention on the pitfalls in allowing water pressures to go unregulated or poorly regulated.

Copies of Bulletin 553-A are available upon request by writing to Leslie Co., 229 Delafield Avenue, Lyndhurst,

N. I.

U. S. May Put 60,000 KW Power Plant in Space

A WESTINGHOUSE Electric Corporation executive has predicted that by 1970 the United States will be able to orbit a nuclear-powered electric generating system with a capacity of

60,000 kilowatts.

John W. Simpson, vice president in charge of the company's atomic power division, told scientists and engineers attending the 1960 American Nuclear Congress that the technology of the next decade will permit this country to maintain astronauts in space exploration with a large-scale satellite auxiliary power system that uses a reactor as its source of energy.

He also discussed a second major application of atomic power in astronautics, a nuclear engine that will offer a means of rocket propulsion of "more than twice the efficiency of its chemical counterpart for a given rocket frame." Predictions on the operation of a large-scale generating station in space are based on the belief

that by applying today's technology, America could generate one kilowatt of electric energy with eight pounds of payload, Mr. Simpson explained. "I believe that by 1970, it is reason-

"I believe that by 1970, it is reasonable to expect to get a kilowatt of power for every four pounds of payload," he added. "Thus, 120 tons of payload would give you a 60,000-kilowatt output. Of course, we would need boosters powerful enough to put such weights into orbit, but such boosters are planned and, with the development of nuclear rockets, far heavier payloads will be possible."

For interplanetary space travel, probably nothing close to this amount of power will be needed, but the availability of such energy could have a profound effect on such plans, t he Westinghouse official noted. He warned, however, that many problems remain to be tackled and solved before the nuclear rocket becomes a reality. He cited the need for intensive development work, especially in materials. The materials of construction must not only have adequate high-temperature strength, but also be able to resist corrosion and erosion.

Turning his attention to space propulsion, Mr. Simpson described the problems involved in sending a 50-ton payload on an orbit-to-orbit trip to Venus and back. Using a high-energy chemical system would require the lifting of 18,000,000 pounds from the launching pad and an over-all system of five or six rocket stages, he said. The same mission could be accomplished with only a two-stage nuclear powered system capable of lifting only 2,400,000 pounds. In more difficult missions such as one involving a soft landing on Mars, there is an even larger ratio in favor of nuclear propulsion.

However, in applications such as intercontinental ballistic missiles and close-in satellites, existing chemical rockets perform so well that there would be limited purpose in developing atomic power as an alternate system, he pointed out. It is in the long range and big missions that nuclear rockets will probably first show their advantage.

60,000 Hours Logged by Westinghouse Gas Turbine

AN 1800-hp gas turbine installed on the Mississippi River Fuel Corporation system in May of 1949 has compiled more than 60,000 hours of operation—probably the longest service record of any industrial gas turbine, according to Westinghouse Electric Corporation.

Built by Westinghouse, the unit was first installed at Wilmar, Ark. Later it was moved to the Bonne Terre, Mo., compressor station.

Westinghouse industrial gas turbines have undergone many design changes since this "granddaddy of gas turbines" was built. Combustors are now mounted oblique rather than parallel to the turbine shaft, making units much shorter. An outer casing now encloses combustors, improving appearance; where four main bearings were used in the 1949 unit, better alignment is now possible with only two, and other design changes have considerably improved gas turbine efficiency.

G-E Names Kent Manager Electric Utility Marketing Operation

MILTON F. KENT has been appointed manager of the General Electric Company's newly-created Electric Utility Marketing Operation, it was announced here recently by Clarence H. Linder, vice president and group executive for the company's recently-formed Electric Util-

ity Group.

Mr. Linder said more detailed information on the scope and function of Mr. Kent's new responsibilities will be made known later. Mr. Kent will be headquartered in Schenectady, New York. He was formerly manager of Apparatus Product Sales for the company's User Industries Sales Department at Schenectady. In this capacity he was responsible for sales of apparatus products to such industries as electric utility, steel, mining and oil.

A-C To Develop Extruded Ceramic Fuel For Reactors

RECENTLY announced by the AEC is a contract award to Allis-Chalmers initiating a development program for extruded-ceramic fuel material. As part of AEC's multi-million dollar fuel cycle development program, the development work will be done by the A-C Nuclear Power department—Washington.

The program involves developing and demonstrating an extrusion process for the fabrication of ceramic fuel bodies. Making a major contribution to the advanced technology of nuclear

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PUBLIC UTILITIES FORTNIGHTLY-MAY 12, 1940 THE U. S.

"We were taking the plan for granted"

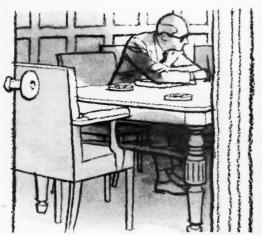


"You know, Ed, it's so easy to take these things for granted. I knew we'd put in the Payroll Savings Plan a long time ago. So I just assumed we had a good, sizable number of our employees who were buying U.S. Savings Bonds regularly.

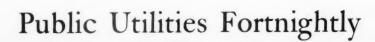
"Well, last week our chairman asked me for the exact figures. When I checked up I found we had less than a third of our people making regular use of the Plan. We needed to have someone explain-in person-the convenience and soundness of this fine thrift program.

"I contacted our State Savings Bonds Director right away. With his quick, friendly help we set up a thorough canvass of everybody on the staff. We found that many of our company family were just waiting to have someone tell them how simple it is to share in this sound, systematic thrift plan. Then the polite suggestion, 'And why not start now?' really did the work. Today we have a participation we're proud of, and we're taking steps to increase it still more, every payday."

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fuel fabrication, it is expected that these fuel bodies will demonstrate substantial cost advantages over fuel

now being used.

By employing extrusion techniques, it will be possible to manufacture ceramic fuels that are identical to pressed pellets in cross-section, but considerably longer.

IBM To Provide "Off-The-Shelf" Computer Programs For Industry

A NEW service to enable IBM customers to get their computers "on the air" faster at sharply reduced costs was announced recently by the Data Processing Division of International Business Machines Corporation. A wide range of pre-tested computer programs, each designed to handle a major data processing function common to all firms within a specific industry, will be made available through the company's new Programmed Applications Library.

Currently available on the library shelf are a utility customer billing and accounting program for the solid-state IBM 7070 data processing system and an IBM RAMAC 305 hospital accounting program. Computer programs for other major industries, as well as programs for smaller data processing equipment, will be announced as soon as developed.

Announcement of the Programmed Applications Library and of the utility program was made by Gilbert E. Jones, president of the IBM Data Processing Division. Speaking to representatives of the gas and electric industry, Mr. Jones described the new IBM program as a versatile public utility customer accounting program designed for the solid-state IBM 7070

data processing system.

Mr. Jones said, "The Programmed Applications Library is as important as any machine announcement we could make in its ultimate service to IBM customers. For the many users of IBM computers in leading industries, the programs in this library will mean unprecedented cost and time savings by reducing to a minimum their planning cycles for installation of an IBM data processing system." He added that the 7070 program will give these advantages to any public utility planning to use a 7070 system for its customer billing and accounting.

The programs in the Programmed Applications Library will be ready

to perform approximately eighty per cent of the computer user's particular data processing job. Each program will include the program instructions, the block diagrams and the problem definition which an IBM customer needs in preparing for computer processing of his industry application. The individual customer will only have to make limited additions or modifications of approximately twenty per cent to the library program to meet his special requirements and complete the program that will perform 100 per cent of his job.

FPC Approves \$48.1 Million Appalachian Power Project

FEDERAL Power Commission has given Appalachian Power Company a license to build a \$48,100,000 power project on the Roanoke river in Vir-

ginia.

The facility known as the Smith Mountain Combination Project, will have two segments. One will be built around a concrete arch dam about 235 feet high, the other—18 miles downstream—around a rock-fill dam about 90 feet high. The combined system would have a total capacity of 479,750 kilowatts.

New Isolated Phase Bus To Pacific Gas and Electric

THE first shipment of General Electric's radically new isolated phase bus has been made to Pacific Gas and Electric for use in that utility's Pitts-

burg station.

Designed to reduce losses produced by circulating currents, the new bus utilizes a recently developed method of shielding. By connecting together the ends of the three-phase bus enclosures, the external flux is reduced by as much as 90 per cent over that existing in standard isolated phase bus.

Furnished to Pacific Gas and Electric as a self-cooled pressurized unit, the bus is also available with forced-cooling or for 105-degree high-temperature operation.

Two New Utility Hoists Offered By Ingersoll-Rand

TWO new air powered utility hoists capable of handling maximum loads of 7,000 and 5,000 pounds have been developed by Ingersoll-Rand. The air motor hoists, called K6U and K6UA Single Drum Utility Hoists, have greater capacity than any other singledrum air hoist and retain the same

portability and adaptability of smaller units.

The I-R utility hoists are designed to handle the heavier loads on erection, maintenance and materials handling jobs, without multiple reeving. Both new hoists are equipped with reversible six cylinder air motors with infinite speed graduation provided by the throttles. A self-energizing brake supplements the reversible motor for positive control.

For further information write to Ingersoll-Rand Company, 11 Broadway, New York 4, New York, requesting Form 5274.

Federal Pacific Introduces New Line of "Stored Energy" Charged Spring Mechanisms

A NEW line of "stored energy" charged spring mechanisms, operating both manually and electrically, has been introduced by Federal Pacific Electric Company for use in its 5 kv and 15 kv DST magnetic air circuit breakers.

According to the announcement, the new mechanism provides extended mechanical life and greater maintenance-free operation of the circuit breaker, delivers only that amount of energy actually needed to close the breaker; buffers at the end of the spring stroke reduce the closing shock in the mechanism to a value that is less than with the conventional solenoid; takes no more space than that required by a conventional solenoid. Present users of Federal Pacific breakers may easily convert to stored energy with slight modification.

Additional information can be obtained from Federal Pacific Electric Company, 50 Paris street, Newark 1,

New Jersey.

Cochrane Issues Bulletin on Solids-Contact Reactors

COCHRANE Corporation has issued a revised 20-page bulletin (Pub. 5001-C) on solids-contact reactors for water clarifying and softening. The publication has many new photographs and drawings illustrating various types of reactors and their basic design considerations.

The bulletin also contains information on chemical feeds and auxiliary equipment and lists many applications for solids-contact reactors. Copies may be obtained from Cochrane Corporation, 17th Street below Allegheny Avenue, Philadelphia 32.

Pennsylvania.

The P.U.R. Guide

► A new and different approach to the educational needs of utility employees — called . THE P.U.R. GUIDE—is now widely in use throughout the industry. Somewhat descriptively, the GUIDE is referred to as "a journey of understanding." It takes the user through the economics of public utilities and through many other non-technical phases of utility operation. It was organized by and is issued under the general supervision of an experienced staff of specialists.

► THE P.U.R. GUIDE program is a systematically and consecutively arranged series of weekly lessons, in pamphlet form, offering a simplified, progressive, step-by-step story about the nature of the utility business, its important place in the American economy, the present conditions under which it is conducted, its day-to-day objectives and responsibilities, the existing problems with which it is confronted and other current subjects arising in connection with organization, financing, management, operation and regulation. This program adds guidance to experience in the development of the company "management team."



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Features of THE P.U.R. GUIDE

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- ▶ Ring binder embossed with enrollee's name
- Leader's Manual for group discussion
- ► Occasional reprints from Public Utilities Fortnightly
- Enrollments on company order only

Comments about THE P.U.R. GUIDE

Our Company is currently involved in several training programs, and I feel qualified to evaluate the information that you are sending out. I think this type of material is, without a doubt, the very best that could be obtained for key utility employees.

Director of Personnel, Electric Company

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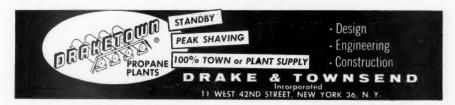
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TACOMA:	55°-74°	34°-44°	35.20 inches	
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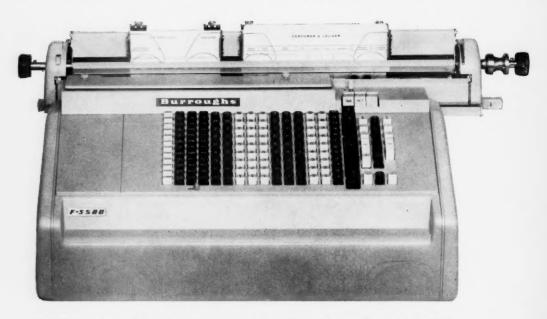
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